





The

# GEOGRAPHICAL MAGAZINE

JANUARY 1943 1/3

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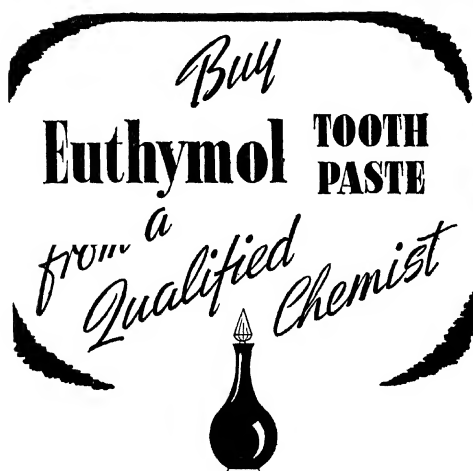


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# The Scott Report

## A New Charter for the Countryside

by L DUDLEY STAMP, D Sc

*Dr Stamp was Vice-Chairman of the Committee appointed in October 1941 by Lord Reith, then Minister of Works and Buildings, in consultation with Mr Hudson, Minister of Agriculture, to inquire into the future of land utilization in Rural Areas. After nine months of constant deliberations, in the course of which over a hundred bodies prepared memoranda and gave evidence, the Committee's Report, signed by eleven of the twelve members, was published in August 1942. Popularly known as the Scott Report, after Lord Justice Scott the Chairman, this document may well become a new charter for the countryside.* \*

In her article in THE GEOGRAPHICAL MAGAZINE of September 1941 Professor E. G. R. Taylor made it clear that many of the features of our country which we value highly today are the result of carefully coordinated planning and construction in the past, whereas the features we so much deplore are the result of later uncontrolled individualism and *laissez-faire* economics. It is amazing how many of our best roads today follow the bold road plan laid down by the Romans nearly 2000 years ago and how many of the least satisfactory, both as local and through routes, are the result of the attempt to patch up an outworn medieval system which grew up haphazard and unplanned. In olden days there was in fact coordinated development over much of the countryside because the bulk of the land was owned or controlled by the landed gentry who, however dictatorial and narrow in outlook, had an eye for effect, as may be seen in the conscious striving for beauty in the layout of their great parks. The spoliation has come with unbridled individualism, manifesting itself in ribbon or pepper-pot development of houses and bungalows over so much of what was until recently open country. On a national plane the flow of new industry to certain central belts of the country may have resulted in increases there of prosperity—increased rateable values and spending power for local authorities—but only at the expense of the creation of great 'depressed' areas in the older industrial regions which are more excentrally placed.

Up to the present, town and country planning has been purely local: planning schemes are initiated by local authorities or combinations of local authorities, planning has not been compulsory, so that it has been possible for a small urban or rural district council, for example, to vitiate the schemes for a whole

county or large area by 'refusing to play'. The schemes have been subject to approval by the Town Planning department of the Ministry of Health (now transferred to the Ministry of Works and Planning) but there has been no initiation of schemes from above and very little guidance. It is scarcely surprising that the nation is becoming aware, not only of the spoliation, indeed ruination, which follows uncontrolled or uncoordinated development, but also of the unsatisfactory results of purely local planning without a national plan behind it.

Accordingly the Government has promised that a Central Planning Authority shall be set up, and the Scott Report is based on the assumption that this will be done and that the Central Authority will have positive policies for such important matters as the location of industry and the future of agriculture. Indeed this is made clear in the Committee's terms of reference.

To consider the conditions which should govern building and other constructional development in country areas consistently with the maintenance of agriculture, and in particular the factors affecting the location of industry, having regard to economic operation, part-time and seasonal employment, the well-being of rural communities and the preservation of rural amenities.

It is obviously of the first importance to understand what was the position before the war and how it had arisen, so that the first part of the Report—44 pages—is devoted to a very careful survey entitled 'The Present Position'. Then follow some 35 pages of 'Recommendations', covering a wide and varied field, indeed all phases of life in the countryside. But behind them all are clearly a number of guiding principles.

The first is that the prosperity of this



By courtesy of the British Council

*Characteristic fragment of rural England Poynings Village, Sussex, with the South Downs beyond*  
*"A countryside of varied yet homogeneous agriculture, of changing yet unified scenic aspect, a mosaic of small fields, of scattered farmsteads and cottages, of attractive villages—the heritage of the English speaking world"* (Scott Report)

country depends upon a careful use of resources and that the basis of prosperity in the future may not be the same as it has been in the past. The great expansion of the export trade in manufactured goods and the import of raw materials, cheap food and feeding-stuffs in the 19th and early 20th centuries led to a lordly disregard of home natural resources. Now is the time to think seriously of the conservation of the assets which we have in our own country—hence the need for keeping the good farm land from becoming covered with bricks and mortar and so lost to food production for ever—now is the time to seek the most adequate use in the national interest of every acre of our limited land area. Manufacturing industry at the same time must be given every facility to develop in those areas where its own efficiency and the national interests are best served. Taking a short-term view, it may be cheaper for an individual firm of manufacturers to choose a virgin tract of agricultural land for a new

factory. In due course houses for workers will arise and local or public authorities will be compelled to provide extended services—roads, transport, electricity, gas, water, sewerage, medical, health and educational facilities. Yet near at hand there may be derelict industrial sites in a town where all those services are fully developed and inadequately used: the only deterrent factor is the initial cost to the individual developer of clearing the site. Because the Report draws attention to this aspect, some readers seem to think that it is opposed to the dispersal of industry recommended by the Barlow Commission. This is very far from the truth. It is no use being sentimental about 'small village industries': there is a place and an important place, often with new possibilities, for the craftsman—the blacksmith, garage mechanic, saddler, etc.—in the village, but the trend of modern industry, even those such as jam making and canning which use agricultural produce, is towards relatively large



Central Press Photos

*Harvesting by the Women's Land Army on the Sussex Downs in 1942. It is not yet fully realized that Britain now has the most highly-mechanized agriculture in the world. This fact alone alters all arguments about the economics of British farming based on pre-war standards.*

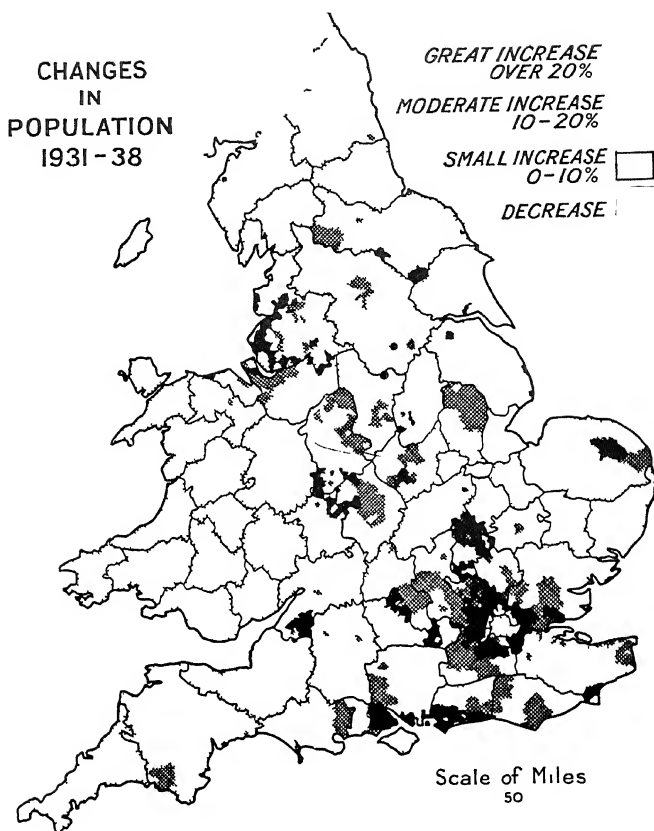
units for efficiency. One such in a village is dangerous, for short time or closure may ensue in time of depression and a balance needs to be maintained by several factories. The village cannot remain a village, it becomes a town; but such industry would give new life to many a small town. "Summarizing, we recommend that industry should be encouraged first to make use of vacant or derelict sites in towns, and that where industries are brought into country areas they should be located in existing or new small towns and not in villages or the open country. On balance we consider the introduction of carefully regulated industry in this way would be beneficial to the countryside."

Bound up with this question of the location of industry is the recognition that Britain includes the most remarkable range of natural conditions: mountain and plain, wet land and dry land, very fertile soil, very poor land, dry areas and cloudy, rainy tracts, sunny southern slopes and cold bleak heights. Hence there

have grown up many varied types of farming—at least seventeen are recognized—but all closely interconnected so that, for example, one area rears cattle while another fattens them for the butcher and still another attends to milk production. Farming, like Nature, evolves rather than undergoes convulsive changes. Treated as an industry, it too must be afforded the right location and security of tenure to carry on, always bearing in mind that farming is a long-term business and that the farmer always has to plan some years ahead. The wages of the ploughman which he pays out and the fertilizer bill he meets this week he will—perhaps—recover when next year's harvest is gathered and the crop sold. The stockman's wages, the vet's fees, the stud fees, he will perhaps recover three years hence when the cows yet to be conceived and born are in full milk yield. So the Scott Report recognizes that farming is, even regarded purely as an industry, in a somewhat special position, that a long-term

Government policy is essential with stability of conditions, that there should be control to ensure a good standard of farming. The Committee was not concerned with the detailed organization of farming, nor with farming policy, but was satisfied that the enormous progress of mechanization and the general growth of efficiency with war-time conditions rendered prophecies based on pre-war conditions invalid and out of date.

In the second place the Committee recognized that there is more in life than mere material prosperity, that there are human values impossible to assess in monetary and economic terms. The quiet beauty of the countryside is innately precious, only when it is disappearing before our eyes do we begin to realize that it plays a part in our national life which we instinctively feel to be fundamental. We spend time and money on our gardens: how many of us add up the market values of the few vegetables and flowers we produce and the cost of our own labour at market rates to assess whether our effort has been worth while? Can we measure in terms of pounds, shillings and pence the value of a few geraniums in a window-box, the splash of colour afforded by some sturdy Michaelmas daisies in our own little plot or the few dozen tomatoes we have raised ourselves from a packet of seed? Similarly the Scott Report recognizes that we cannot assess the value of the countryside but holds that "it is a duty incumbent upon the nation to take proper care of that which it thus holds in trust"—a heritage which the citizens of this country



*Map prepared by the Land Utilization Survey of Great Britain*

*"This map demonstrates very clearly the depopulation, in the years preceding the present war, of nearly all parts of rural England and Wales. With a few exceptions, all the great increases were in the broad central belt from South Lancashire to London and the South-east—especially in the peripheral areas of the great population centres of Liverpool, Manchester, Birmingham and Greater London"* (Scott Report)

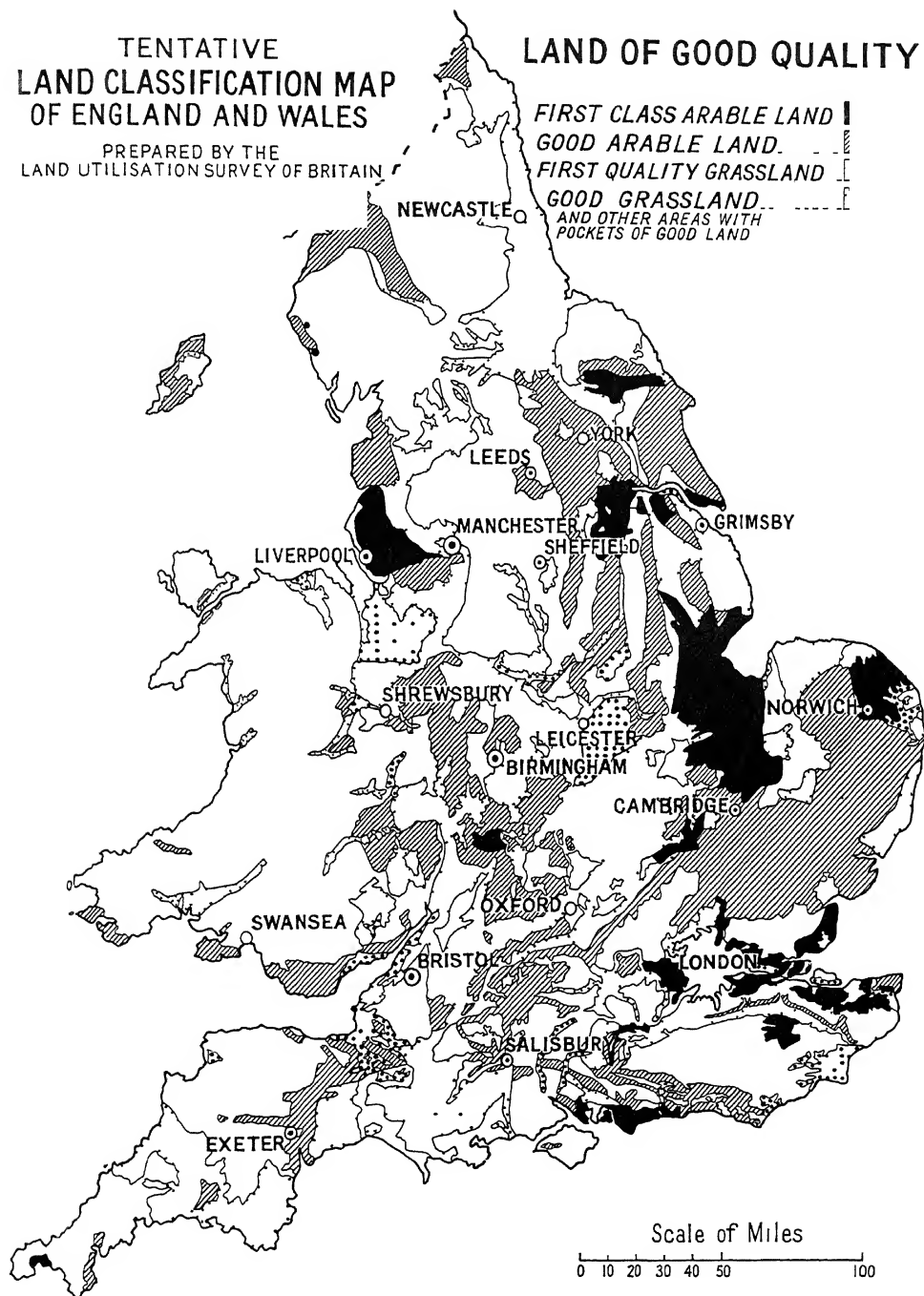
share with all those of British descent. Of course the Committee lays itself open to a charge of 'sentiment', but eleven of the twelve members are confident that the conservation of the countryside is worth a conscious effort and even an expenditure of money which after the war may mean a sacrifice in other directions. Bound up with this is the recognition that the countryside of Britain is what it is because it is used, because it is farmed—it is man-made and cannot be 'preserved'. Virtually the only way (incidentally the cheapest way) of keeping the countryside is to farm it, so that the farmer and the forester are really

# TENTATIVE LAND CLASSIFICATION MAP OF ENGLAND AND WALES

PREPARED BY THE  
LAND UTILISATION SURVEY OF BRITAIN

## LAND OF GOOD QUALITY

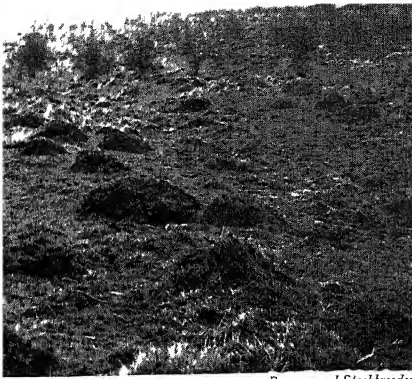
FIRST CLASS ARABLE LAND  
GOOD ARABLE LAND  
FIRST QUALITY GRASSLAND  
GOOD GRASSLAND  
AND OTHER AREAS WITH  
POCKETS OF GOOD LAND



*Map specially prepared for the Scott Report by the Planning Department of the Ministry of Works and Planning*

*'This map shows only the areas of good agricultural land' (Scott Report)*





*Farmer and Stockbreeder*



*Farmer and Stockbreeder*



*Farmer and Stockbreeder*



*Farmer and Stockbreeder*

(Top left) In 1939 "much of the land was so neglected that it deteriorated to rough grazing" (Scott Report) A field at Shepreth, Huntingdonshire, covered with ant-hills and bushes (Right) The same field in 1942—the first stage in reclamation made possible by the mechanization of farming (Bottom left) Our farming in 1938 "To meet low prices farmers endeavoured to reduce their costs this was often done at the cost of neglecting the ordinary maintenance work of the farm ditches became choked and no longer served as effective drains (right) barns and sheds were not put in order, hedges straggled, farm roads were left unmade, signs of decay were to be seen" (Scott Report)

the custodians of the national heritage of the countryside, and this is the solution of the problem of 'preserving amenities'

The third great principle is the recognition that all human beings are not cast in the same mould and that a full life for the individual as well as for the nation can only be achieved by affording opportunities for the legitimate development of differing tastes and differing ideals, always remembering that the development of the individual must not be at the expense of the community and that minorities have rights Rural depopulation and the

drift to the towns have been caused by the social and economic disadvantages of living in the country the Committee believes that conditions can and should be so adjusted that those who want to live in the country can do so without undue material sacrifices and that then the problem of the 'balance' between town and country will adjust itself So they make detailed suggestions regarding rural housing—at present totally inadequate, the wider provision of electricity, gas, water, sewerage, the resuscitation of village life by village planning with community centres of





*By courtesy of the British Council*

*How picturesque, but what would it be like to live in? No piped water, no drainage, no gas, no electricity, damp from below and above, plagued by rats and mice "The condition of all rural dwellings should be investigated and restorations in harmony with traditional local house design carried out to bring old dwellings up to modern standards" (Scott Report)*

the village college type, or halls and facilities for recreation, temporal and spiritual refreshment

An increasing number of townspeople will want to enjoy the countryside. Hence access is a matter of urgent consideration: the proper demarcation and signposting of footpaths, the reopening of the old coastguard's path round the coast, the provision of national and regional parks, forest parks, nature reserves, camps and holiday villages—all these need a constructive national policy. Then there is the need for the regulation of those whose

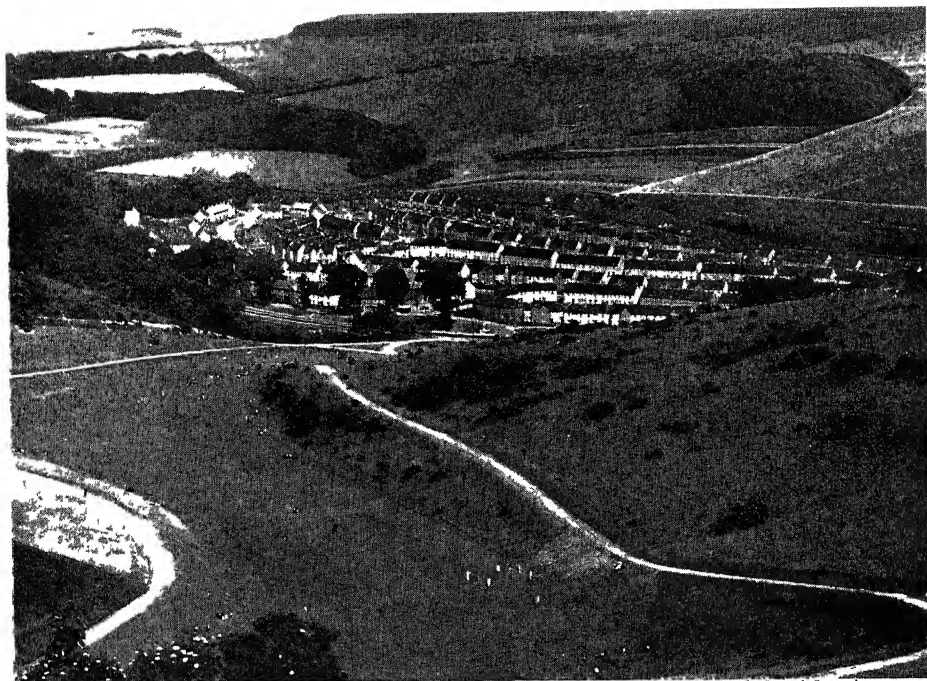
activities are ruining our heritage. There are garish advertisements, ugly petrol stations, incongruous bungalows, tumbledown railway carriage shacks, wayside cafes, noisy road-houses, conspicuous pylons, derelict mine dumps and tip heaps, even ill-placed cemeteries and out-of-place afforestation. All these have one aspect in common: they are useful, indeed important to the community. But they all have another aspect in common: the need for a proper yet firm and sympathetic control. So the Scott Report makes recommendations about them all. Taken



*Old age pensioners happy to work on the land again. But their home in 1942 has few conveniences - no bathroom, no sink, so father has to shave in a dim light from the window over the kitchen table. The primus stove is the nearest approach to luxury when coal is scarce, there is no gas or electricity and water has to be carried from a pump in this Essex village (Right) 16th-century 'cot' saved from decay and destruction by the townsman-owner - a home of which anyone might be proud. Only two miles from the main line, but the village still has no public telephone, no electricity, no gas and no water*



*L. D. Stamp*

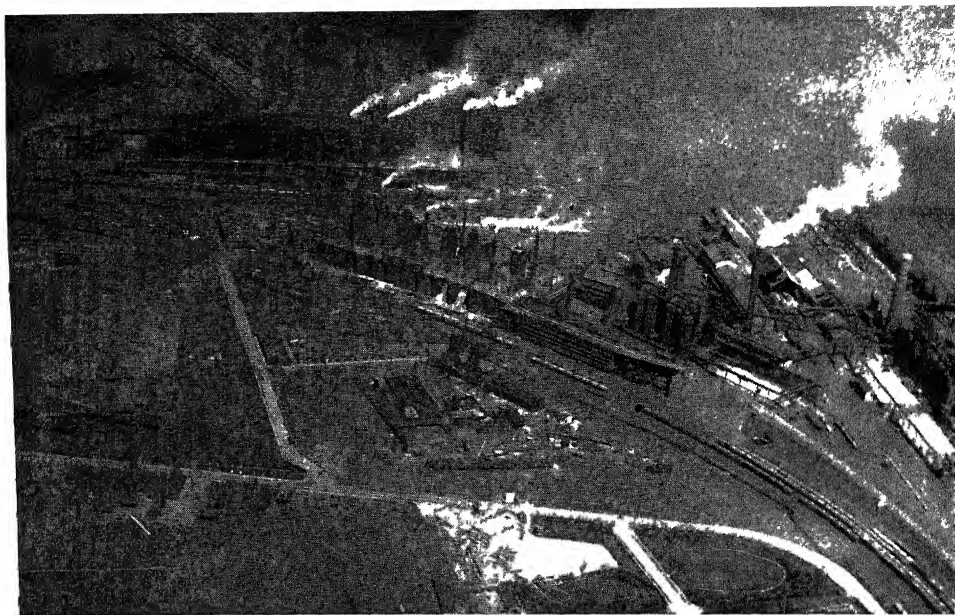


*By courtesy of the British Council*



*By courtesy of the British Council*

(Top) "New villages should be planned and should as far as possible be of a compact and closely knit character every village should be provided with adequate playing fields" (Bottom) "Most frequently houses designed for towns are erected in country districts, whereas country dwellings should be specially designed nearly all detached or semi-detached houses are too tall in proportion to their length and depth their appearance is bound to be unsatisfactory" (Scott Report)



Zero 14m

(Above) Heavy industry—iron smelting “Many heavy industries are immobile and must remain in the large urban concentrations”—“the location of industries which emit noxious fumes or poisonous effluents should be subjected to stringent control” (Scott Report) (Below) Extractive industry—chalk for cement “Though their location is determined by immutable physical conditions, which may often necessitate their coming into country areas, they should be subject to effective planning control” (Scott Report) Chalk is widely distributed in the country, and so only certain parts need be worked “A white dust is inevitable from the cement industry which when it settles on a ripening plum crop may ruin the whole” Thus permissible locations should be decided on principles of national planning

Arthur H. Hoi







*Geographical Publications Ltd*

*There is a footpath through this lovely farm "There is still great need for a better understanding, based on both goodwill and better knowledge, between town and country much damage by trespass, the breaking down of hedges and unnecessary opening and leaving open of gates is undoubtedly due to the difficulty of finding footpaths" (Scott Report)*

individually, many of its recommendations are of small matter, even trivial, taken together, they afford a glimpse of a post-war Britain within our grasp which shall embody all those many features for which we have as individuals so long hoped but which without corporate action would remain unattainable.

Apart from the legislation and governmental machinery which will be needed to carry out the recommendations there is an immediate and urgent need for more knowledge. If we are to keep the best farm land, we need to know where it is the preliminary work of the Land Utilization Survey which has divided the land into ten main types (1-4 good land, 5 and 6 medium, 7-10 poor) needs to be particularized and extended. We need to know more about the organization of farming and farm units and where these are efficient we need to know more about transport and transport needs, the needs of our various industries. These and a hundred other subjects call for continuous scientific study and a research department to collect the information and collate it. Steps are being taken—the Minister of Agriculture has

appointed a Chief Adviser on Rural Land Utilization charged with the study of matters concerned with agriculture and rural land in relation to national planning, while the Ministry of Works and Planning has a central maps department—but much more is needed.

It was not within the Terms of Reference of the Scott Committee to deal with the financial aspects of the problem. For the most part that was the function of the Uthwatt Committee whose Report appeared a month later. Two things are, however, important. In the first place, the members of the Scott Committee convinced themselves that all their proposals were "essentially and immediately practical and practicable" and that finance was not an insuperable difficulty in any of them. In the second place, the proposals of the Scott and Uthwatt Committees where they cover the same ground make recommendations which are for practical purposes identical, their other parts are complementary and in no way incompatible. Both Reports of necessity assume that the promises given in both Houses of Parliament will be fulfilled—that national planning will

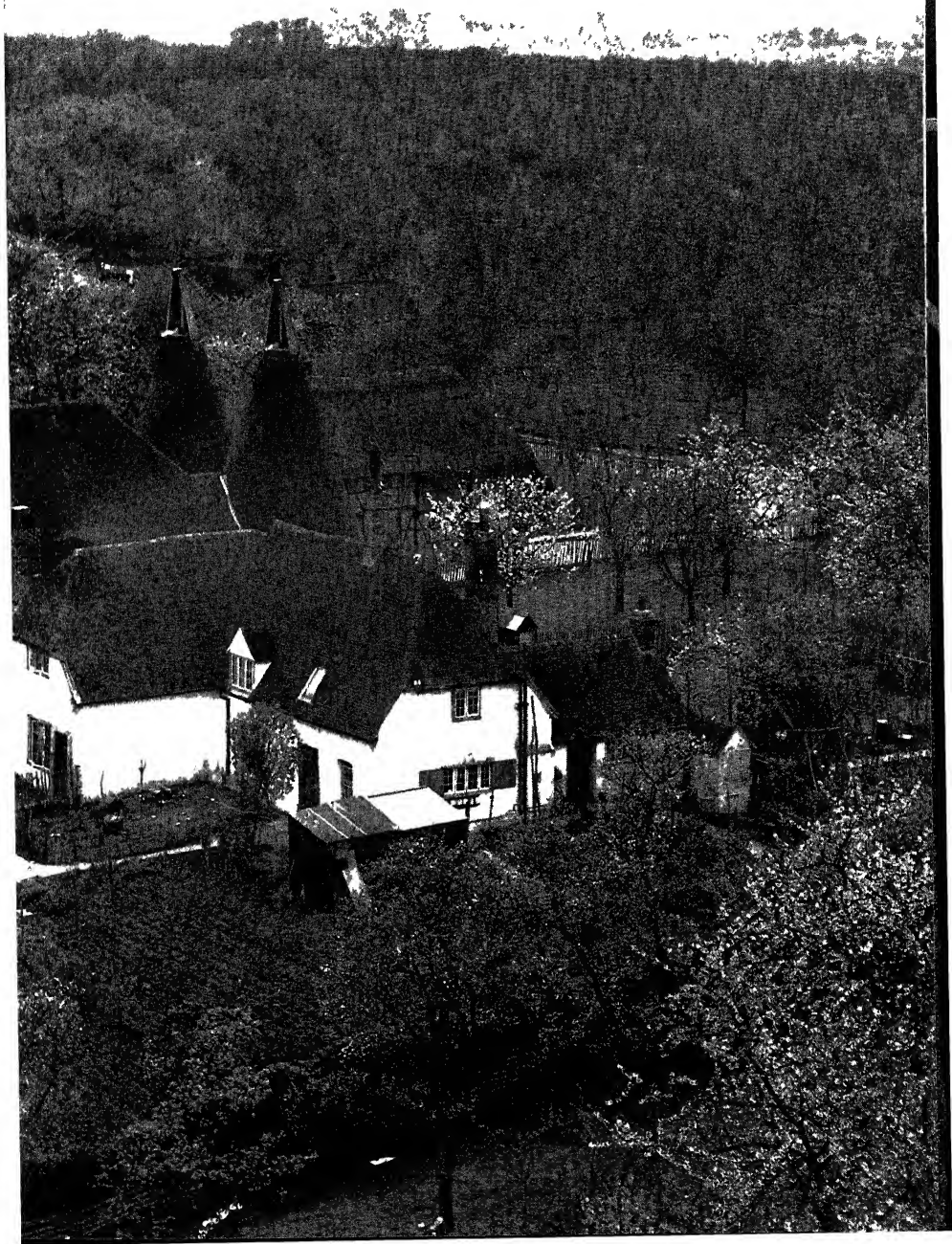


*By courtesy of the British Council*

*"A conscious and creative urge to bring beauty as well as efficiency into the countryside. The stately parks are a living testimony to this" (Scott Report). Cattle grazing near Chermes, Buckinghamshire (Opposite) "There is no antagonism between use and beauty" (Scott Report). Cherry orchards and oasthouses, Newington, Kent*

be a reality and that a Central Planning Authority will be established. Having made so many practical suggestions, the Scott Committee felt it essential to show briefly by what machinery of Government they could be carried out, and in this their proposals are identical with the Uthwatt Report. First, there must be a Minister of National Planning (or Minister of National Development) with a small highly qualified staff. But national planning is largely a question of the fair allocation of land for varied needs, so the Minister must have no departmental axe of his own to grind. He should have no departmental cares of his own—but would sit as Chairman of a committee of ministers (*e.g.* of Agriculture, Transport, Defence, Works, etc.) whose departments are concerned with the actual use and development of land. Their rival claims would be thrashed out in committee, and once national policy was decided

each ministry would be free to carry out the development functioning in its own sphere. It is obviously impossible that the control, for example, by the Minister of Agriculture, of future development in farming could be handed over to a single 'Reconstruction Minister'. This experiment was tried after the last war and failed. In order to secure that the Minister of National Planning is free from "day-to-day administration, that administration is properly handled, that local authorities, private developers and landowners have ready access to informed advice and authoritative direction", both Reports urge the need of a Central Planning Commission under a full-time independent Chairman (not a Government official nor a 'politician'). By choosing Commissioners of proved knowledge and ability in their own spheres, any fear by the public of "Control by Whitehall" would be removed and the Commission would





I D Stump

*The Aftermath of Mining* "Provision must be made for removal of derelict buildings" (Scott Report)

secure unification of essential research and a continuing policy sometimes difficult with changing ministers. With this central guidance on national policy, local authorities would be free to carry on the planning of their own areas—freer actually than at present because the financial obstacles such as payment of compensation for restricted zoning would be removed by the Uthwatt proposal that all development rights should be purchased by the State. The scheme aims at securing an ideal marriage of central guidance and local initiative.

In view of the wide implications of the Scott Report it is interesting to note the personnel of the Committee. Far from being a group of theoretical idealists, they represent a very wide range of sound knowledge and hard experience: the managing director of a leading firm of motor manufacturers and a managing director of the Co-operative Wholesale Society, a leading landowning peer and an agricultural labourer, the head of the Women's Land Army and the County Councillor widow of a leading industrialist, a shipping expert and a past president of the Surveyors' Institute, a prominent farmer and a university don. Amazing that they should all agree on the right programme for the future and rank themselves solidly behind the Chairman, whose life has been so largely spent in the weighing up of pros and cons and reaching the right decision. The twelfth

member of the Committee alone disagreed — as a professor of Economics of the *laissez-faire* school he exercised his right of academic detachment in restricting himself to those matters which can be measured in economic terms, of necessity his analysis is based on the past and his disagreement is fundamentally

with the terms of reference which postulated a prosperous agriculture. Are we really sure that our standard of living was really so high before this war that we set it up as a goal to be maintained at all costs? Can we really believe that the world will continue to supply Britain with foodstuffs and raw materials at under cost and be eager to buy again those manufactures which they have since perforce learnt to make for themselves? The curse of the twenties of this century was the '1914 mind', a not inconsiderable obstacle to realistic thinking now is "what we did in the last war". That is why eleven out of twelve members of the Scott Committee think it is better to try to look forward rather than be tied by what has been in the past.

There are those who will say that the world after the war can look after itself: that all talk of reconstruction is premature, that the only task of the moment is the winning of the war. With that we all agree and nothing must be allowed to hinder the war effort. But in the words of the Scott Report, "It is our firm belief that a vital incentive to the war effort is the presentation of a clear picture of a better world which lies ahead and which, if plans are drawn up and the essential preparations made in advance, can be achieved after this struggle is over. To delay planning and the legislation to carry the plans into effect until the time for action is upon us—the end of the war—we believe to be a fatal error."



# Antarctica

## II. The Living Fringe

by F D OMMANNEY

*Last month we published the first of two articles Mr Ommanney has written for us on Antarctica. In it he described the continent and the conditions which he experienced in the course of three two-year periods he spent there between 1928 and 1939 while on the scientific staff of the 'Discovery' Committee. In his second article he turns from the land to the surrounding seas and the fringe of coasts and islands where the only inhabitants—whales, seals and sea-birds—live and multiply.*

ALONG the edges of the pack-ice skirt that fringes the Antarctic continent and down the avenues and 'leads' within it thousands of whales travel in herds throughout the summer. They form the basis of the only great commercial industry that flourishes in the far south, the whaling industry, which reached colossal proportions before the war.

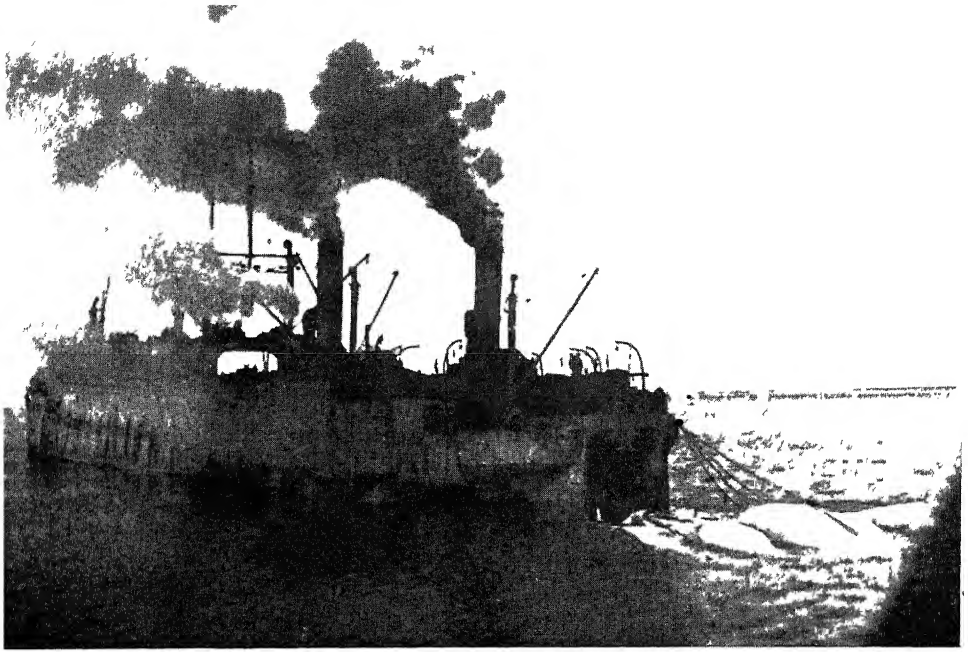
The whale is a truly astonishing animal, fish-like in shape and yet not a fish but a mammal, breathing air. It is really a sort of horse adapted for life in the sea. Like the wild horse it travels in great herds and like the horse it grazes, though not on any kind of grassland but on the clouds of tiny shrimps that fill the waters around the pack-ice edge.

It is amazing that this huge creature, the largest animal that has ever lived on earth, not excepting the giant reptiles of old, should live on nothing more substantial than a shrimp about an inch long. But the shrimps are engulfed in uncountable millions so that when the whale's stomach is slit open at the whaling station the shrimps, which the whalers call 'krill', come pouring out like corn. As a special adaptation to this unappetizing diet, the whalebone whales which form the basis of the great southern whaling industry have lost all their teeth. In the yet unborn baby whale the beginnings of teeth may be found, but in the grown animal the teeth are replaced by a series of vertical horny whalebone plates, designed to strain the shrimps out of the water. The whale swims along with his mouth open. Closing his mouth he forces the water out at the sides of it. The sea water passes out between the horny plates but the shrimps become entangled on the hairs which form the inner edges of the plates. With his spongy inflated tongue the whale sucks the shrimps back into his narrow gullet.

Like the horse, again, the whale is a slow-breeding creature. It has only one young at a time and takes two years to complete the cycle from mating time, through birth and nursing to the next mating season. The whalebone whales spend their time, so far as is known, migrating from the tropics to the Antarctic pack ice and back again. They feed on shoals of shrimps along the Antarctic pack ice during the summer and voyage north in the winter to breeding-grounds off the coasts of South Africa, Australia and South America. When in the north, on their breeding-grounds, they mostly starve and return to the Antarctic very lean, in great contrast to their fat well-fed condition when they go north in the autumn.

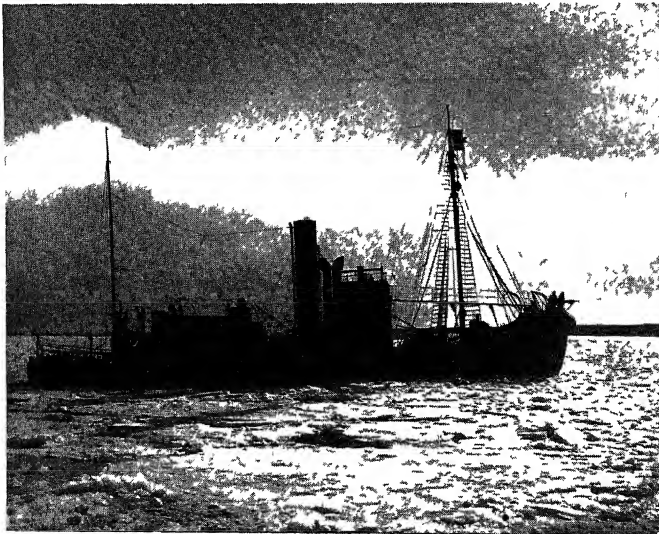
Whales have many remarkable adaptations to fit them for their life in the sea. There is the loss of teeth and their almost fish-like shape — almost because the tail fin is carried horizontally instead of vertically like that of a fish. And, buried deep in that smooth tubular side, there can be found still the tiny bones which are all that remain of the hind limb. Then there is the remarkable non-return valve formed by the nostrils and gullet, which enables the whale to open his mouth wide below the surface without swallowing any water. But most remarkable is the thick coating of firm white fat under his skin which makes him impervious to the cold of Antarctic seas, for the whale is a warm-blooded animal like any other mammal and would perish from cold but for this special clothing.

All the whale's tissues indeed are impregnated with fat to an extraordinary degree. It is this coat of blubber and the oil that fills all his bones and tissues that makes the whale so valuable. When the blubber has been stripped off and boiled down in pressure boilers it gives a clear white whale oil which



L. J. Martin

(Above) A factory ship at work. The carcasses of the whales are moored near the slipway in the stern. (Below) A whale catcher in an Antarctic harbour. The loaded harpoon gun can be seen at the point of the bow. Note the crow's-nest on the mast.



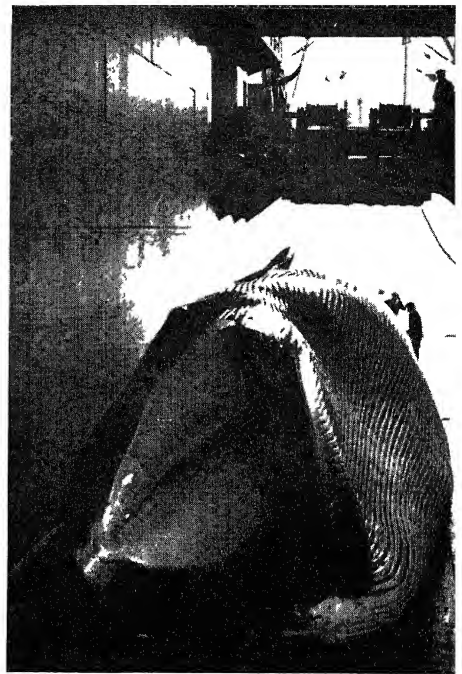
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is used for making soap, margarine and, as a by-product, glycerine. It is also used for making high explosive, so that in these days whale oil has an extra value. Every part of the whale, blubber, muscles, bones and entrails, goes into the boilers at the whaling factory and comes out some hours later as this white oily liquid. Nothing is wasted except the horny whalebone plates, which are returned to the sea from which they came.

Nowadays whaling is carried on by giant factory ships of up to 20,000 or 30,000 tons,



A J Martin



A J Martin

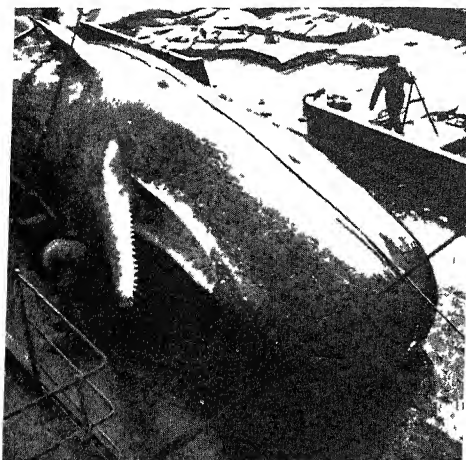
(Above) A catcher delivers whales to the factory. The whale on the right is being drawn up the slipway. The huge sieve of whalebone-plates in the roof of its mouth can be seen. (Below) Carcasses of fin whales are of great interest to penguins.

with all the apparatus of an up-to-date factory on board. Each factory employs a fleet of six or seven small fast whale-catchers armed with harpoon guns. The factory ship lies off the pack ice, following the whale herds along it, and the catches go to and fro throughout the day and bright night for several months upon the chase. They tow then catches back to the factory to be cut up.

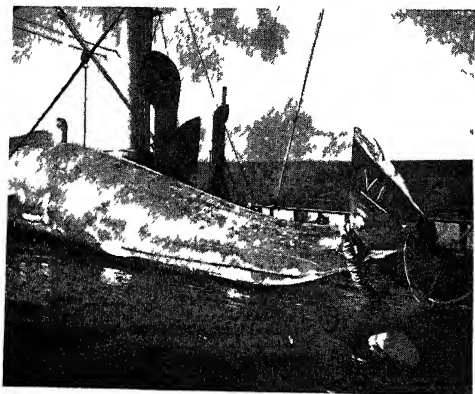
The whales are shot with a harpoon fired from a gun by a charge of black powder. The harpoon carries at its end an explosive grenade and three non-re-

A J Martin





A. J. Martin



A. J. Martin

(Above) A sperm whale on the flensing deck. The huge head contains the wax-like spermacite.  
(Below) A blue whale, which is the largest of the species.

tractile barbs. When the harpoon, carrying out the harpoon line, strikes the whale the grenade explodes, shattering the whale's backbone and three barbs project outwards so that the harpoon cannot withdraw from the flesh. The whale in its death struggles, which must often entail great agony, is then played like a giant fish at the end of the harpoon line. The line runs up over the foremast of the catcher and down into the hold of the ship, so that the foremast may be likened to a giant fishing-rod and the hold

to the reel paying out the fishing line. When at last the whale is dead, often after a terrible and bloody battle, his corpse is blown up with air to prevent it from sinking and towed tail first back to the factory ship. Here the blubber is stripped off by means of long-handled curved knives, and the flesh cut into convenient sections. The bones are hewn in pieces by steam saws. All are tipped into the cooking-pots below the deck. In about eleven to sixteen hours all that remains of the leviathan is a steady trickle of clear white oil running along a pipe to the separators which strain the water from it by centrifugal force.

The whaling fleet goes south in December. In March the ships return with their tanks full of whale oil, the liquid mortal remains of some hundreds of whales, having already, perhaps, shipped home in separate tankers the remains of several hundred more.

The slaughter in the years before the war was terrific and melancholy. Some thirty thousand whales a year were hunted down and slain so that men might slay each other in a vast, crueler war. There was a danger that before long this slaughter would so deplete the whale herds that it would kill the goose that was laying the golden eggs. Wise Government control, by means of a noteworthy piece of international cooperation, introduced regulations designed to lessen the chances of this catastrophe happening. For a catastrophe it would be, not only because of the ruin that would befall the whaling industry but because the whale is a natural marvel in a world where natural marvels are becoming fewer every year. It is a shy and timid beast, alert and sensitive as a wild horse. It has a knowing and humorous eye.

So it is from the seas around the Antarctic rather than from the continent itself that the chief benefit to mankind is derived. For on that desolate land there is no life. On the bleak mountains and islands that fringe it some poor mosses and lichens grow, and on the islands farther north, such as South Georgia, there is a coarse tussock grass and some low, inconspicuous flowers. But around the coasts, in every nook and cranny, on every accessible ledge and shelf, live myriads of birds. Of these the chief are the Penguins, those true natives of Antarctica. Penguins are widespread in the Southern Hemisphere. They are found as far north as the coast of Patagonia, on Dassen Island off the coast of Cape Colony, on the South Island of New Zealand. There is even a dwarf penguin on the Galapagos Islands on the Equator itself. But the true home of these bizarre and fan-



Central Press

*The penguin rookery at Macquarie Island, a sub-antarctic island lying to the south of New Zealand*

tastic little people is the Antarctic coastline and the outlying islands. Here they often cover the surface of the cliffs in countless thousands, filling the air with their chatter and their stench. You can see their white waistcoats speckling the bare cliffs from several miles out to sea.

The Ringed Penguins and the Adélie Penguins are the commonest though there are many other species, some of them with gay crests or, like the stately King Penguin, with a beautiful orange breast and flame-coloured collar. The Ringed and Adélie Penguins are comparatively soberly dressed in black and white. The Adélie has a coal black helmet with white eyeholes and the Ringed Penguin a white mask with a black line under each eye.

They come up from the sea and appear all over the cliffs about November, and there is great business and activity in those formless and inhospitable colonies. The hens begin scraping together little uncomfortable beds of angular stones. The gentlemen go about among the ladies bowing and offering them stones as a sort of tribute. The lovers stand opposite one another with their necks outstretched and their beaks pointing heavenwards. They make a strange crowing noise and plunge their beaks into their breasts to nibble at themselves. All this means something in their language, but what it is they have soon forgotten for the next second they are gazing vacantly and foolishly at nothing, apparently ignorant of each other's existence.



Central Press

*Large colonies of elephant seals are often to be found in summer sprawling on the beaches of sub-antarctic islands*

Then suddenly they fall to again, bowing and chortling to one another

About the beginning of December the result of all this appears and each lady has, tucked underneath her white breast, her heart's desire—a dirty white egg, or even two. These she guards with devilish fury, lungeing and striking out at any of her neighbours that come too near and even behaving offensively to other proud mothers who happen to be entirely occupied with their own intimate concerns. Meanwhile her husband makes voyages out to sea where he feeds on the same shrimps, the krill, that the whales eat. On his return he disgorges onto his comb-like tongue a half-digested pulp out of his own crop which his wife eagerly devours.

The family appears at the end of December or thereabouts as a miserable scraggy little object covered with grey down. It soon grows, however, and is as large as its parents by the middle of February. It is untiringly fed by both its parents, who make constant

voyages out to sea and return to disgorge the contents of their crops for it to feed on at second-hand. But when the children reach the size of their parents the business of feeding their offspring becomes too much for all those devoted couples, who cannot cope with the incessant clamorous demands their children make upon them. So the growing young are grouped together in crèches, batches of shrilly-piping querulous school children, under the charge of a few nurses who stand sternly by and furiously assault any intruder who happens to come too near. All the other adults now devote themselves to making voyages out to sea to get food. On their return they are set upon by the young, ever clamorous to be fed, directly they set foot upon the beach. But about the end of February their patience begins to tire. Then the young often scream in vain, begging with vain tears for food from grown-ups, become suddenly morose and indifferent.

By this time the ground around the colony is drenched with innumerable droppings and

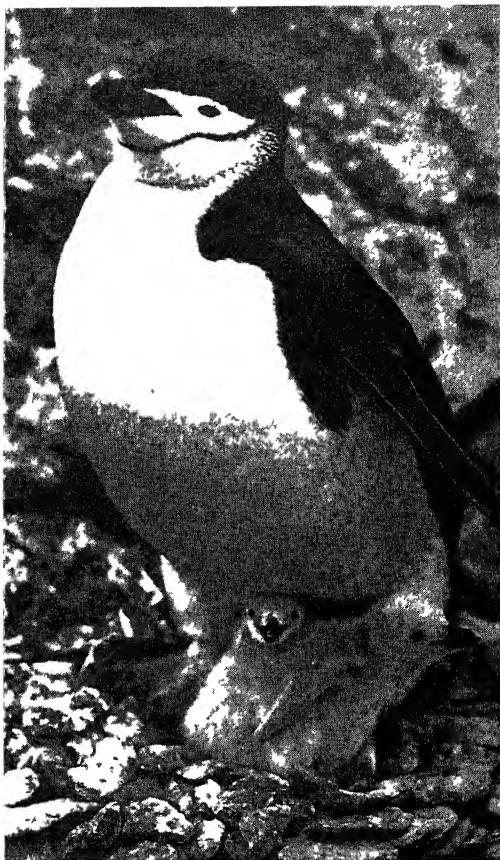


beaten flat between the rocks by the trampling of countless webbed feet From the impregnated earth an indescribable pungency goes up into the chill air Now the children exchange their black down for feathers They become ragged and ludicrously moth-eaten for a while Then they blossom out into the neat black-and-white evening dress which is their adult wear They take to the sea and may be seen practising swimming on calm days, floating on their backs with tail and beak up like little boats, paddling with their flippers Soon they are jumping and darting arrow-like through the water as their parents do At the beginning of March the penguin colony breaks up and is deserted Quiet descends upon it and soon a mantle of snow covers it, gently at first and then in whirling driving clouds So the penguin city remains buried until the spring uncovers it, made new once more for the owners returning from the sea

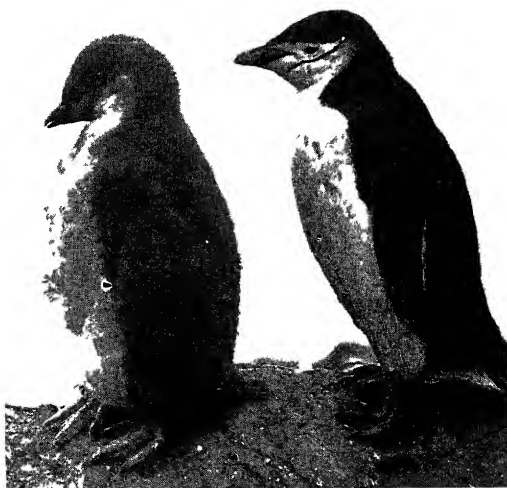
I cannot do more than mention the Emperor Penguin, that strange bird that nests and brings forth its young in the depth of the Antarctic winter, thousands dying on that account every year Nor can I say anything about the many seals which lie about the beaches and dart like torpedoes through the water hunting penguins The Leopard Seal is said to catch penguins with one snap of his jaws and turn them inside-out with a shake of his head And I must leave to lie in undisturbed and perpetual sloth the great Elephant Seals of South Georgia which are hunted for their oil around the beaches

In spite of the advances in the methods of exploration which the aeroplane and motor-sledge have brought about, the Antarctic still remains Terra Australis Incognita, an unknown land, hostile to mankind Vast tracts of it have never been trodden by the foot of man and never will be The solitudes where he has passed soon forget him and sink back into that eternal hush that magnifies into a tumult the sigh of the sea under an ice floe, the cough of a seal or the distant puff of a whale The Antarctic has been the scene of some of the highest examples of human endeavour and courage, and the names of Scott, Amundsen, Shackleton, Edward Wilson and Oates still ring in the ears of Englishmen and Norwegians

*Ringed penguins the one above has two young chicks, the one below an almost fully grown chick, though it still retains its fluffy down feathers*



Central Press





G. H. I. Kimble

# Algerian Background

by ALAN HOUGHTON BRODRICK

ALGERIA is a country of contrasts. Nearly nine-tenths of its immense area is desert,—but desert interspersed with oases,—known as the 'Southern Territories'. The remaining tenth is the Algeria of the north which occupies the centre position of the three states Tunisia, Algeria and Morocco. These make up what our fathers used to call 'Barbary'.

This northern Algeria, although as I have said but a tenth of the whole country, contains

over six and a half million inhabitants as against less than 750,000 for all the vast Saharan spaces southwards. Northern Algeria is a land of mountains and high plateaux, deep valleys and rocky precipitous coasts. Northern Morocco, Algeria and Tunisia make up a geographical whole which the Arabs call the 'Island of the Maghreb' or the 'Island of the Western Land, and the name is apt enough, for the 'Island', bounded on three sides by the



G. H. I. Kimble

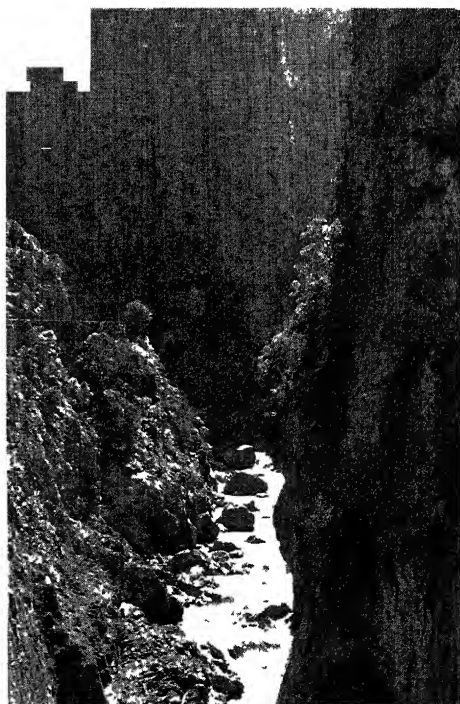




G H T Kimble

(Opposite, top) *The coast-line near Bougie, a hundred miles east of Algiers, (bottom) cultivated land about half a mile inland and the Route Nationale near Bougie (Above) The Djurdjura mountain mass just south-east of Algiers, (below) road from Bougie to Sétif which runs through the Kerrata Gorge (right)*

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sea and on the fourth by the Sahara, is an upland traversed by the numberless ranges which compose the Atlas system of mountains. Although northern Algeria has no peaks to rival the Great Atlas in southern Morocco, snow falls and remains for many months in its high hills.

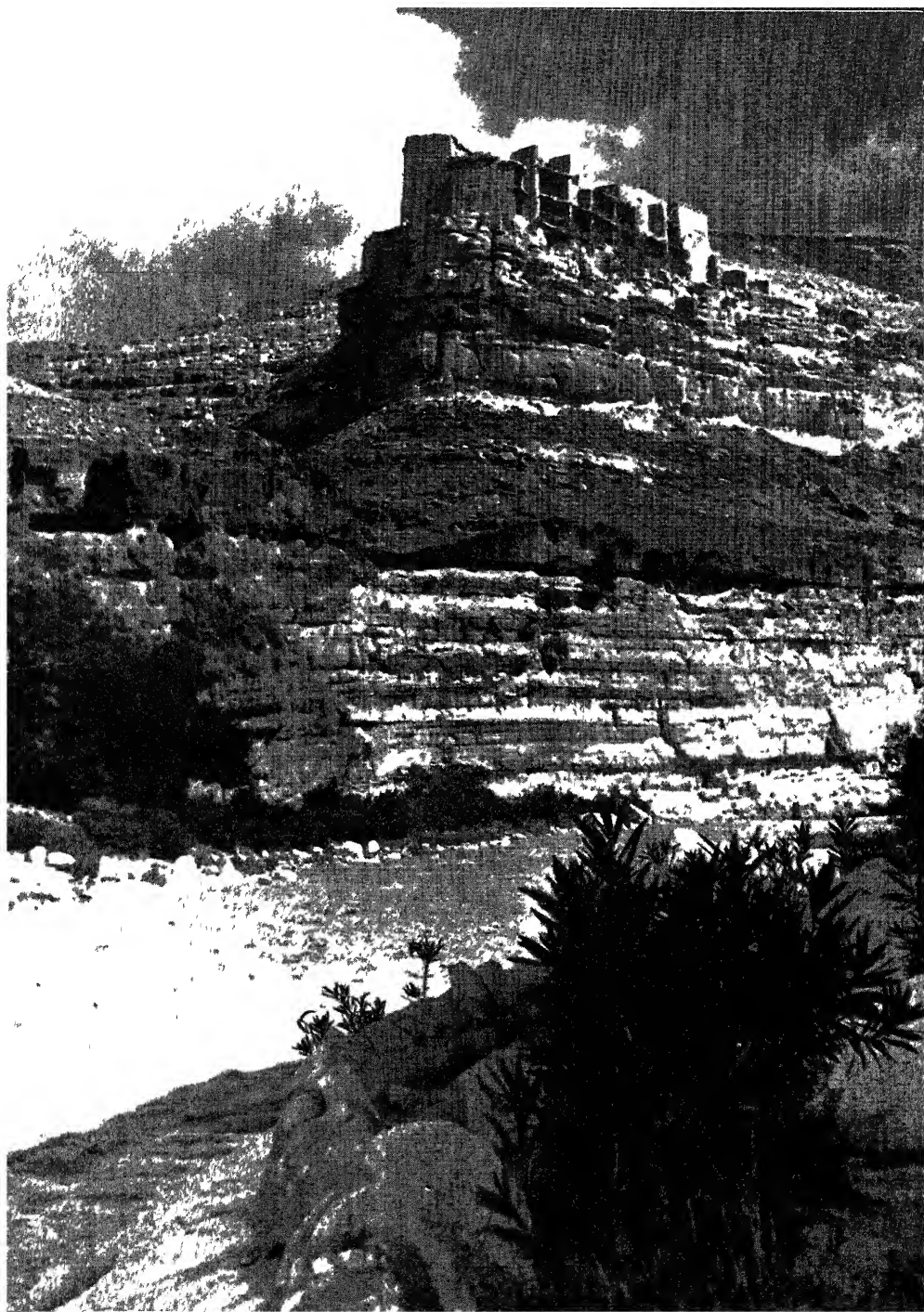
The transition from the uplands of the north to the sands and rocks of the Sahara is sometimes abrupt, as at the southern face of the Aures Mountains in south-eastern Algeria. But sometimes, as for instance when you go south from Algiers city, first through the gently sloping *tell* or fertile strip near the coast (though high up beyond the cliffs) and then through hills to the high plateaux and down towards the first oases, it is almost unnoticeable until you realize that you have sand instead of soil and that the only greenery is the tufts of the palm trees.

The northern part of Algeria is narrow, but long from west to east, and owing to the conformation of the land the natural communications are lateral.

(Above) A Berber hill-top village (Below) Berber village in the Djurdjura Mountains (Opposite) Storehouses perched on a precipice above a wadi in the Aures Mountains near Biskra

G H T Kimble







The photographs reproduced on these pages show the varied face of Algeria from just west of Bougie, where Allied troops landed on November 11, eastwards along the coast towards the Tunisian frontier. Then inland among the gorges, broad valleys, plateaux, bare hills for the most part, since even when the rainfall is plentiful the trees that have not been used for fuel have been eaten by the goats. Afterwards we have the transition to the drier lands of the south. Next we are in the Sahara of sand-dunes (they are comparatively rare, for most of the Sahara is rock and stone) near El-Golea, over 400 miles nearly due south of Algiers. And beyond El-Golea there is nothing but desert until you strike the Niger basin some 1500 miles away. Last we have Beni Isguen, one of the seven cities of the M'zab country inhabited by a curious trafficking people known as the 'Jews of Islam' who travel far and wide over North Africa on their business, but always return to their desert home.

*G H T Kimble*



(Opposite, top) A by-road leading off the main highway between Algiers and Bougie, (bottom) many of the roads in the south of Northern Algeria are nothing more than rocky wadis, such as that at Baniane (Right) Sand dunes near El-Golea, over 400 miles due south of Algiers, (below) 150 miles to the north-east lies Ben Isguen, a holy city in the heart of the M'zab country



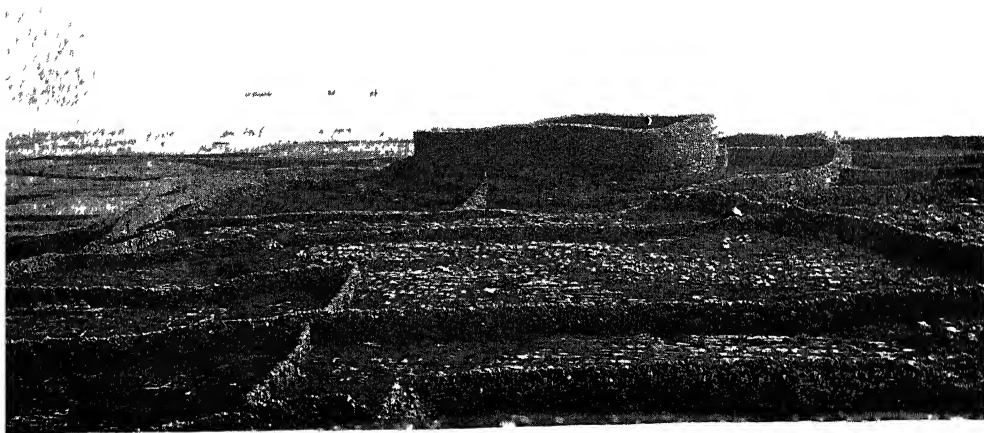
From A H Brodrick





# The Aran Islands

by THOMAS H. MASON

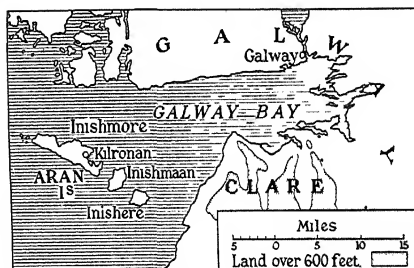


WHEN one travels across the centre of Ireland from east to west—from Dublin to Galway—one sees a flat country alternating between rich pasture land and great stretches of bog around whose margins are the low undulating fertile ridges called eskers by the geologists. In fact, a great part of the road passes through or around these ridges, which are composed of gravel and sand deposited by the melting ice at the close of the last glacial epoch.

The centre of Ireland is composed of carboniferous limestone but at Galway Bay one finds a difference. The rocks of the northern or County Galway side of the bay, which begins at Galway City and extends due west for about 30 miles, are hard igneous rocks, whereas those on the southern or County Clare side are limestone.

The sea has penetrated the junction of these widely different geological formations, but the high limestone ridges still remain above the water and form the Aran Islands, which lie across the entrance to the bay. Geology thus confirms the old legends which state that the islands were originally connected with the mainland.

The process of breaking down the rock is still going on—the Atlantic Ocean may rest,

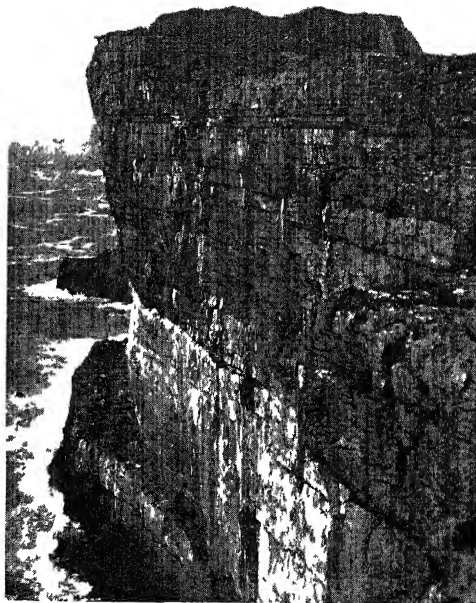
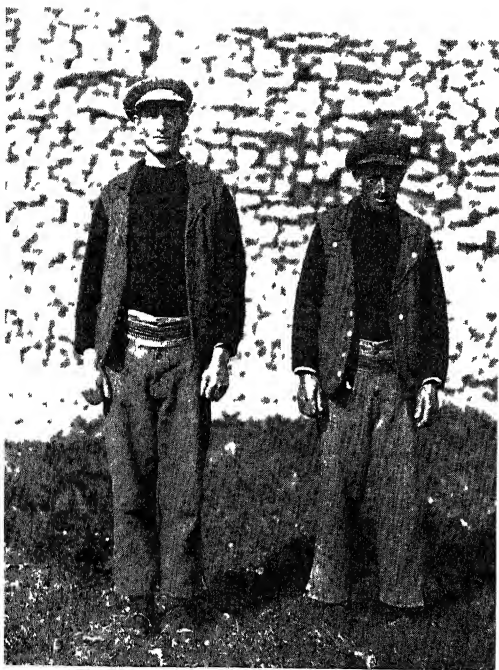


Stanford London

but it never sleeps—because the stratification is horizontal and easily undermined. Even within living memory large gaps have been made in the high cliffs which form the islands' protective rampart on the western side.

There are three islands—Inishmore (the great island), Inishmaan (middle island) and Inishere (eastern island)—and the cliffs rise to their greatest height, 300 feet, on Inishmore where they form the seaward protection of several enormous stone forts.

From the western cliffs the land slopes steeply towards the eastern side which is protected from the fierce Atlantic gales, and



*Two island men wearing sleeveless jackets and wide trousers of handwoven tweed with slots at the bottom. Their belts are called 'creeses' and their sandals 'pampooties'. On the right is the 300-foot cliff of Inishmore, crowned by the pre-historic fort of Dun Aengus.*

it is on this side that the small villages are built, not merely on account of the protection, but also because there are numerous beautiful strands from which the islanders can launch their light canvas-covered boats.

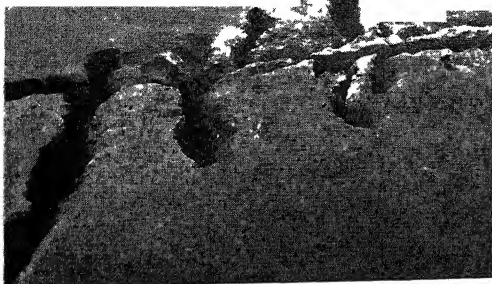
Bleak and windswept and with little soil, the islands have nevertheless been inhabited from very early times. Evidence has been found which shows that neolithic man occupied the beaches. A number of Bronze Age monuments are found on the higher slopes and it was during the Iron Age that the great forts were erected.

The population during the Iron Age must have been considerable, as the building of the forts required a large number of organized workers. During the early Christian period the population was probably greater than at any other time, as in addition to the ordinary

inhabitants, then as now employed in fishing and farming, there was a considerable ecclesiastical population on the largest island, Inishmore.

From the 6th to the 10th centuries 'Aran of the Saints' was one of the great Irish Christian universities which attracted scholars from and sent missionaries to every part of Europe, and thus preserved the Christian heritage after the fall of the Roman Empire.

During the Middle Ages, and the Elizabethan, Cromwellian and Williamite wars, the islands suffered many vicissitudes on account of their strategic situation which controlled the sea approaches to Galway. That is the historical background. In modern times there is much intermarriage between the islands and in a smaller degree with the mainland, but nevertheless the islanders are a distinct people in which the strongly predominant element is pre-Celtic long-headed, quick-witted, delightful people known to anthropologists as the Mediterranean Race, who arrived in Ireland about 2000 B.C. and were subsequently conquered by the much less attractive and more quarrelsome Celts. The present population of the Islands is about 2000, of whom more than half live on



Inishmore, which is 9 miles long and varies in width from  $\frac{1}{2}$  a mile to  $2\frac{1}{2}$  miles. The other islands are more compact, Inishmaan being roughly 3 miles by  $1\frac{1}{2}$  miles, while Inishere is practically square, about  $1\frac{1}{2}$  to 2 miles from side to side.

As one approaches the islands on the steamer from Galway, they appear as rocky wildernesses with here and there a small hamlet or an isolated whitewashed cottage in the welter of grey rock. Small patches of green show where there is cultivation, and one wonders how so many people manage to exist in such circumstances.

This impression is strengthened on landing because the surface of the greater part of the islands consists of bare rock, sometimes flat and smooth with the surface intersected by deep narrow fissures or sometimes a confused jumble of broken and weathered rock upon which it is difficult to walk. Evidences of glacial action can be seen everywhere in the form of rounded escarpments and boulders which are scattered on the surface. Many of these boulders are granite and must have been carried by the ice from the mainland.

On Inishere and Inishmaan there are no trees, but on Inishmore a few are found in one protected hollow on the east side.

The people are industrious and versatile. The Aran man is half farmer and half fisherman. There are, however, a few specialized craftsmen such as weavers and boat-builders.

The natural soil, though very nutritious, is scanty, so the islanders are continually 'manufacturing' new land on the surface of the bare rock. This is slow and hard work. First the boulders are broken up with a sledge and the broken pieces filled into the crevices, then alternate layers of sand and seaweed mixed when possible with scrapings from the side of the road are laid on the rock. All this soil is carried in baskets (panniers) by the donkeys and ponies and also frequently by baskets (creels) on the backs of the men and women themselves. The ridges are broad and the bottom of the furrows is the naked rock.

When the field is completed it is surrounded by a wall built of loose stones, which serves the double purpose of protecting the crop.

(Top) Deep fissures in the bare rock characterize the surface of the greater part of the Aran Islands. (Middle) 'Manufactured' soil in which potatoes are grown. The shallowness of the soil above the rock can be seen. (Bottom) Sunday morning in Aran: the islanders, who are intensely religious, coming back from Mass.



from the wind and from depredation by straying animals. Splendid crops of potatoes are grown in these 'manufactured' fields.

Seaweed is an excellent fertilizer, rich in potassium salts. After a storm numbers of the men may be seen up to their waists in the sea gathering the weed which is one of the most valuable assets of the islanders. On the western coast of the mainland, in places where the seaweed is not easily procurable, the population is small, but, where there is easy access to the sea, a larger population exists whose main sustenance is derived from agriculture.

On Inishere at low tide I have seen the men cut the weed from the rocks by means of knives made from hoop iron, attached to the end of poles. Working between tides with a short time-limit is strenuous, as the wet weed is heavy and must be placed above high-water mark. The men in the water gather large armfuls and dump it at the edge of the sea, where it is loaded into creels. These are carried on their backs by youths and young women to a safe distance. The girls must be very strong, for the work would be beyond the capacity of an ordinary city man. To protect the back and loins from the water a dried goatskin is worn over the ordinary clothes.

As a fertilizer, the seaweed may be used wet, but it is more easily transported when dry. Donkeys do most of this work, even the poorest family owning a donkey, but ponies are not so common. Not merely in the islands, but along the whole western seaboard, the donkey is the most useful animal. Some of the seaweed which is allowed to dry is put into stacks and during the early summer it is burned in kilns on the shore for conversion into kelp.

Kelp is a hard substance that looks like concrete and from it iodine is extracted. In recent years not much kelp has been made as the price was low and did not compensate the islanders for the heavy labour involved. Another form of seaweed called carrageen moss is also gathered. It is used in making table jellies, for medicinal purposes in chest troubles, as a filler for cheap textiles and a thickener for paint. Scotland is the principal market for the kelp and Lancashire for the



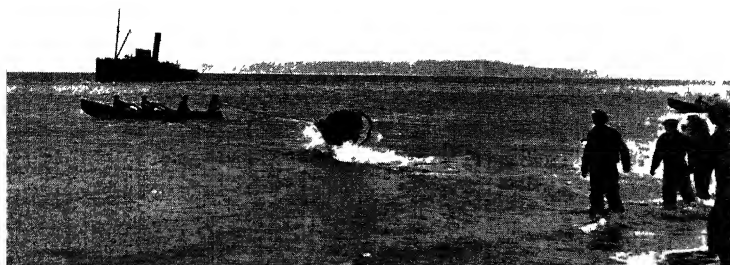
(Top) Reaping seaweed at low tide. It is cut from the rocks by a hooped iron knife attached to a pole. (Middle) The islanders' best friend carries a load of seaweed to be used as fertilizer. (Bottom) Women carry loads in baskets called creels on their backs.



*The art of spinning has not died out in the Aran Islands. This large primitive type of wheel is still used, and rotated by hand.*



*Waiting on the strand at Inishmaan for the arrival of the steamer which will carry the livestock to mainland markets.*



*Cattle are roped by the head and towed by small currachs out to the steamer. The noise and excitement that accompany the operation add to the poor creatures' fright.*

carrigeen moss, both are purchased and shipped by local agents

The women have less arduous tasks as well—they milk the cows, make the butter, help in the field work and look after the poultry, besides performing the usual household duties of their sex. The only clear-cut division between the work of the men and women is in fishing, which is the men's job, and in cooking, washing and spinning, which are exclusively feminine occupations. The art of spinning has not died out and the women knit jerseys, socks and tam-o'-shanter caps for their men folk, from the wool of their own sheep.

The type of spinning-wheel used is very primitive. The wheel, which is large, is rotated by the hand of the spinner who stands beside it. In the northern areas of Ireland a different type is used. It is worked by a foot-treadle and is a much more elaborate piece of mechanism. Known as the Dutch wheel, it was introduced in the 17th century but does not seem to have spread further than the districts where flax is grown. In the woollen districts the older type is still in use.

The food is simple. Fresh meat and bacon are not eaten every day and the staple diet is potatoes boiled in their jackets, fish, milk, butter, eggs, cabbage, home-made bread and tea. The bread is baked in a large iron pot suspended over the turf (peat) fire, which burns without a grate on the stone hearth, with a gentle glowing heat, very different from the fierce heat of coal. Hot embers are placed on the lid of the pot and the result is delicious. Unfortunately there is no turf on the islands and it has to be imported from the mainland of Connemara in hookers. The supply of fuel is augmented by twigs, chiefly bramble, which are used solely to boil water, and also by dried cow-dung. This latter gives out a great heat but the smoke is very acid.

Although the islanders live simple lives with few wants and no luxuries except tobacco and porter, yet, as the war has taught us all, no community can be entirely self-sufficient. In Aran money must be found to pay for imports such as tea, sugar, flour, turf, tobacco and for other payments in lieu of rent to the Irish Land Commission. The ready cash is provided by the sale of pigs, cattle, eggs and wool to the merchants of Galway City, and in a smaller degree by the export of kelp, edible seaweed, fish and lobsters.

There is a harbour at Kilronan, the chief village of Inishmore, but there is none on Inishmaan or Inishere, and the export of

live stock is an exciting and hazardous operation.

Shipping pigs is simple but noisy—their legs are tied together and they are dumped in currachs which bring them to the steamer. The whole performance is accompanied by the unearthly noise of the squealing pigs. Horses and cattle, however, are a more difficult problem. On the day before one of the great fairs in Galway they are collected on the strand where they await the arrival of the steamer.

From an early hour there is a hustle and excitement very different from the usual calm and placid life of the islanders. The road to the beach is thronged with men, women, children and livestock. The school is closed, and the men who have no beast to ship come to help their neighbours to control the cattle and horses, for sometimes, terrified by the noise and shouting, they run amok.

When the steamer arrives the real work of the day begins. A long rope is tied around the head of the animal and other ropes are fastened in a loop around its body. It is then hustled by shouting men and barking dogs into the sea and pulled into deep water by the rope fastened to its head. The cattle make no attempt to swim and their nostrils are kept above the water by the man in the currach, who, leaning over the stern, clasps his arms round the neck of the beast.

On arrival at the steamer an iron hook is lowered which the man in the currach places in the loop of the rope fastened about the body. In order to fasten the hook the man in the currach has to release his hold of the animal's head, when it invariably sinks for a few moments. This is a critical time as, if the job is bungled, the beast may drown. The noise throughout the performance is terrific, everybody is shouting in Irish, the dogs are barking and the excitement is intense.

There are, however, other factors which play a great part in the economics of the islanders. Large families are the rule, it is a social stigma to have only a small family and the childless married woman is an object of mingled pity and contempt.

The islands can only support a limited population, especially since the decay of the fisheries, due to illegal trawling by boats of all nationalities, so the great majority of the young people must emigrate. In the past this emigration was almost entirely to the U.S.A., where in Boston and some other towns there are regular colonies of the island folk.

These emigrants never forget the old people at home and at Christmas-time some thousands of pounds from America form a



*'Himself' and 'Herself' at their own fireside*

welcome addition to the income of the island. The old-age pension has also been a great boon, for in Aran there is an undue proportion of old people in the population.

The pension is not paid to the possessor of a holding which is large enough to provide a subsistence, but this difficulty is easily circumvented. When the owner has arrived at the age for qualification he conveys the farm to whichever member of the family has remained at home, and being now without income he is automatically qualified for the pension.

In recent years the Irish language policy of the Irish Government has also helped, for during the summer months the island is frequented by students, who must have a working knowledge of the ancient language in order to qualify for the legal profession or a Civil Service job. Irish is the language of the home, but most of the people are bilingual, speaking English with an idiom derived directly from the Gaelic. It has a poetic beauty of expression which is not often found in modern English and comes only to persons who live simple lives close to nature.

Fishing is done from the cliffs but it is mainly carried on by low lines from the frail-looking currachs, constructed of laths covered with tarred canvas. These boats are the direct descendants of the early coracles made

of osiers covered with hides. Occasionally heavy wooden boats have been introduced but they were never a success, and the islanders prefer the light, buoyant currachs which are easily handled.

The toll of the sea is heavy, few families have not lost a relative by drowning. The women dread the sea and are never happy when their men are afloat, for they travel long distances into the ocean. The fury of a storm in the Atlantic is a terrible thing, but the men are such superb boatmen that unless it is cyclonic they manage to survive. I have made many journeys in these canvas boats. In calm weather their speed is surprising, and in rough seas I have never felt the slightest anxiety although only a thin piece of canvas was between myself and the Atlantic Ocean.

The boats, which are about 20 feet long, are made on Inishere.

I have seen a man fishing from a cliff 300 feet high, his line was thick and the sinker was a large stone of several pounds weight. He sat with his feet hanging over the edge, and while filling his pipe tied the line to one of his feet. I remarked, "If you caught a conger eel now, he would pull you in," to which the reply "He would so, sir" seemed to partake of that spirit of fatalism which is

common to those who live in intimate contact with nature and whose lives are ordered by elementary forces beyond their control

The costume of the islanders is picturesque. The dark-red skirts of the women and the varied patterns of the shawls which form their head covering are a pleasing contrast to the grey rocks and blue sea.

The factory-made cap has largely superseded the knitted tam-o'-shanter which was much more commonly used when I first visited the islands forty years ago, but the older men still favour the soft felt hat which is also imported. With these exceptions and possibly an occasional jersey, all their clothes are the product of the island.

The tweed is handsome, as a small proportion of wool that has been dyed in indigo is mixed with the natural wool. The trousers are wide with a slit at the end so that they can be easily rolled up when launching a boat. Belts and footwear are unique. The belt, called a 'criss' by the islanders, is brightly coloured and is woven by the women who use the hand as shuttle in the most primitive method of weaving, which was derived from the technique of basket-making. The same type of belt and the same method of weaving is found in some parts of Canada where it was thought to be of Indian origin. Recent investigations have shown that the craft was brought by early colonists from Brittany who taught it to the Indians. It is unknown in Brittany today.

Owing to the difficulty of walking on the rocky surface the natives wear sandals which they call 'pampooties'. These are made of raw cow-hide with the hair on the outside, and to keep them soft they must be frequently immersed in water. Some philologists connect this word with 'pumps' (dancing shoes), others connect it with the 'puttees' worn by soldiers, but, whether it be of French, Teutonic or Sanscrit origin, it is a peculiar word only to be found in the Aran Islands. The use of these sandals imparts a fine carriage to the islanders, who walk on their toes and not on their heels as does the ordinary walker who uses heeled boots.

Both sexes are good-looking and many of the men have a distinctly aristocratic appearance, with clean-cut features and well-developed noses.

It is strange how the racial type has persisted throughout the centuries—I have seen dwellers on the shores of the Mediterranean who were the exact counterpart of men I know in the Aran Islands.

Transport is carried on by donkeys and ponies. On Inishmore there are carts but their usefulness is confined to the main road,

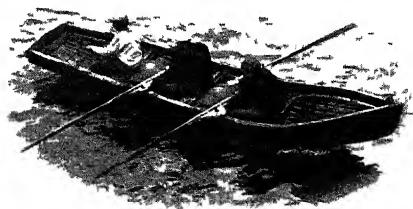
which is on the east side of the island. The small laneways called 'boreens' which traverse the island are too narrow for wheeled traffic. On Inishmaan there is only one small cart which is used to convey barrels of porter from the slip to the public-house. But on Inishere there is not a single wheeled vehicle.

Motor cars are unknown but a few summers ago a misguided visitor brought a motor bicycle to Inishmore. The result was catastrophic as the noise stampeded every animal on the island, so the infernal machine was put into storage for the remainder of his holiday.

The antiquities of the Aran Islands are interesting, especially those of the Iron Age and early Christian pre-Norman period, which are numerous. Dolmens dating from 2000 B.C., stone forts about 100 B.C. to A.D. 200, Pagan and Christian cells, early oratories dating to the 6th century, a round tower, crosses both sculptured and simply incised, churches with chancels dating to the 10th century—all are there, a paradise for archaeologists.

The people are clever, they do well when abroad, and have produced writers and artists of genius—Liam O'Flaherty the novelist, Barbara Mullen of film and radio fame, and strangest of all, a well-known town-planning expert, are Aran Islanders. In Aran one finds a dignity and courtesy, a charm of manner which is impossible to describe—the people are gentlefolk in the natural and highest meaning of the word. I have many pleasant recollections of the evening chats around the fireside, when I was privileged to join the group, for conversation is their principal recreation.

As I have written elsewhere, I shall always remember a conversation on the steamer with an Aran man going to Galway Fair to sell a cow. He asked me about my holiday in Aran, and when I said that I had enjoyed it, adding that I found the people courteous, he was astonished and said, "Well, and isn't it a proper thing to be kindly to strangers?"



# The Story of Kintup

by Lt-Col F M BAILEY, C I E

IN the middle of last century there were large tracts of unexplored country north of the Himalayas. The inhabitants had no desire that it should be explored or to allow strangers, whose purposes they could not understand, to travel about.

It was this situation which led the Survey officers to train a little band of Indians, known as 'The Pandits', and send them out to complete the arduous and often dangerous work of surveying and mapping.

The Pandits had to find their objectives secretly, since the native people were often hostile. They travelled in disguise, without passports or credentials. So that they should not be identified, and victimized, they were officially known by certain initials and not by name. If they got into difficulties they had to extricate themselves as best they might, without looking to the British Government for help.

The thrilling stories of these wonderful men can now be read only in obscure Government publications or in an abbreviated form in the pages of geographical journals of the 'sixties and 'seventies. There you may read of 'N S' or the 'First Pandit' (Nain Singh, C I E) who on one of his great journeys passed through Nepal where he was foiled in his first attempt to cross the northern frontier into Tibet and finally succeeded in reaching the great plateau and exploring the country towards the sources of the Tsangpo, Sutlej and Indus. There will also be found the story of A K, perhaps the greatest of all, whose three years' journey disguised as a pilgrim took him from India through Tibet and Mongolia to western China, whence he travelled towards Assam. But being unable to penetrate the tribal country on the frontier he was obliged to return to Lhasa to find his way to India from there. The portion of his journey from Rima, where he was turned back by the savage tribes to Lhasa, was perhaps the most im-

*A photograph of Kintup taken in 1913, when, thirty years after his secret explorations were completed, he was found in Darjeeling and brought to Simla to tell his story again.*



portant of all, since as his road did not cross the Tsangpo he proved that that river must flow into Assam west of Rima. This man counted his paces during the whole of these three years except for a few days in Mongolia, when he was obliged to ride as no members of his caravan travelled on foot in that country, where indeed man, woman and child live on horseback.

Another, who is believed to be the origin of the Bengali Babu in Rudyard Kipling's *Kim*, is D S (Rai Bahadur Sarat Chandra Das, C I E). He had a great advantage over his fellow secret explorers in being well educated and cultured, as his notes on the things he saw are fuller and more interesting than those of his less competent contemporaries.

All were not equally successful, the results of some were found to be unsatisfactory when checked by the stories of others, one is described as "wanting in nerve". This is not to be wondered at when we consider the danger they ran in case of detection. Their instruments were concealed in the false bottoms of their boxes or in the prayer wheel which every Tibetan pilgrim carries, while the rosary used for counting their *Manis* (the number of times the pilgrim has recited the formula *Om mani padme hum*, "Hail to the Jewel in the Lotus"—Buddha is usually figured in pictures and images as sitting in a lotus) was most useful for counting the explorers' paces, especially when made of 100 instead of the usual 108 beads. Quicksilver necessary for observing the altitude of stars with the sextant, was carried in a coconut, or in hollow cowrie shells stopped up with wax.

We are here concerned with K. P., whose results were not so reliable as those of the trained explorers but whose perseverance in the face of dangers was surpassed by none and whose story is perhaps the most exciting of all.

Kintup, to give him his real name, was an inhabitant of Sikkim, unable to read or write a word in any language. The Survey of India had trained a Mongolian Lama and ordered Kintup to accompany him as servant. They were to endeavour to trace the river Tsangpo from Tibet right through to the plains of India and to settle definitely the question whether there were any great falls during its descent from the plateau of Tibet. If they were unable to follow the river the whole way, they were to mark a number of logs and throw them into it in order that its connection with the Dihong which flows from the Abor Hills into the plains of Assam could be confirmed. An explorer, G. M. N. (Nemsing), had previously been sent down the river but had not succeeded in tracing the river below a level of



Stanford London

about 9600 ft, and as his survey, in the words of the official report, "ended in air", much reliance could not be placed on it.

Kintup had accompanied G. M. N. on this expedition as his servant and for this reason was sent in a similar capacity with the Mongolian Lama. The two men left Darjeeling and crossed the northern frontier of Sikkim, into Tibet in August 1880. At Tso Lamo, a beautiful lake situated among immense snow peaks at a height of 17,000 ft, they found the traders of northern Sikkim exchanging merchandise with the people of Gyantse. The two travellers joined the latter in the guise of pilgrims and accompanied them to their home, whence they proceeded to Lhasa.

The Mongolian Lama had previously spent some time in Sera, one of the three great monasteries of Lhasa, and he now feasted his old companions there for six days. The travellers then returned by boat down the Kyi Chu which flows past Lhasa and eventually reached Tsetang, a town on the south bank of the Tsangpo. Here the Lama fell ill for twenty days and treated Kintup very badly. The next place of any importance they reached was Lhagyari where a semi-independent chief dwelt. After rejoining the Tsangpo they continued down the valley, stopping in caves or villages and begging as pilgrims do. A pilgrim can travel over any inhabited part of Tibet trusting entirely to the generosity of the inhabitants. For it would be an act calling for condign punishment in the next world to allow a pilgrim to starve





*Lt Col F M Bailey*

(Left) *A woman of Pemakochung* (Middle) *Men of Pachakshuri, a country bordering on Tsang where Kintup performed a pilgrimage* (Right) *A Poba from the country where Kintup was enslaved*

Though the people must, one would think, feel that a man was carrying his religion too far when he had himself shut up in a cell for three years relying on the faith of the inhabitants of the nearest village to keep him alive. Perhaps pilgrims were equally sure of their sustenance in our own country in a less material age.

Nang Dzong was the next place of any size reached. Kintup's report on this is as follows: "At the next *jkyop* (rest-house) which they reached they noted a stream which issued from the interior of Nang Dzong and flows in a northerly direction, joining the Tsangpo at a distance of five chains from Nang Dzong. The Tsangpo which was on the left flows towards the east." It was from such quaint scraps of geographical information that the survey officers compiled the map which has proved to be remarkably accurate.

Leaving the river for a day here the pilgrims crossed a pass on which were "many barbarians and many herds of wild sheep." "It is very difficult to cross in stormy weather." At one place they were delayed four months "owing to the Lama falling in love with his host's wife." They continued their journey after settling this little difficulty by paying 25 rupees and eventually reached a monastery, Pemakochung, below which there was no road, the river flowing through gorges among

high mountains. Here was found the steepest fall in the waters of the great river which Kintup reported to be about 150 ft. This was a considerable exaggeration as was afterwards proved, but was due to a misunderstanding or mistranslation of Kintup's words. The two pilgrims then returned up the river and proceeded to travel round the gorge with the intention of striking the river below and following it to India.

After travelling for some days they reached the frontier of the semi-independent district of Po-me, the inhabitants of which are notorious as robbers and are the terror of all the more settled parts of the country. They were stopped at a bridge on the frontier and the Lama went to interview the local official in order to obtain permission for them to enter the country. Kintup was meanwhile left at the bridge. A few days later the Lama returned with the necessary permission and the two pilgrims went to stay at the house of the official, with whom the Lama seems to have made friends.

The Lama now determined not to pursue the quest any further and perpetuated a great act of treachery against his comrade. He told Kintup to stay where he was until his return in two or three days. When two months had elapsed and no signs of the Lama were forthcoming, Kintup's suspicions were

aroused, and he found to his horror and dismay that the Lama had sold him as a slave and decamped. In the words of his report, "He understood then why the Jongpen (official) would not let him go anywhere about the place"

It must be remembered that owing to robbers it would have been impossible for the party to carry large sums of money and that whenever they stopped for any time they were bound to work for their food and subsist on this and on the charity bestowed upon pilgrims. As his leader had treated him so treacherously his first thought might well have been to get out of the country and return to his home, but it was not, on the contrary he thought only of the continuance of his quest which had been so unfortunately interrupted. He remained as the slave of the official for ten months before he got his long hoped-for opportunity, but in March 1882 he succeeded in escaping and continued his journey which had been interrupted on the diversion necessary to avoid the gorges below Pemakochung.

He reached the Tsangpo after some days and travelled down it until he reached a monastery called Marpung. Here he heard that his master had sent men to arrest him, he went to the head Lama of the monastery, bowed thrice at his feet and begged for protection, saying that he was a pilgrim who had been treacherously sold by his companion. The Lama took compassion on him and, when his pursuers arrived, paid them 50 rupees and kept Kintup with him as his own slave. Kintup served him for four and a half months and then asked for leave to go down the valley on a pilgrimage. The permission was readily granted.

Among the equipment supplied to the two explorers by the survey officers who sent them out was an instrument for boring holes in wood, and a supply of small tin tubes each containing a written paper. The tubes were to be inserted in holes bored in logs, which were then to be thrown into the river. Kintup in the course of his adventures had lost the gouge but had managed to keep the tin tubes. He travelled some days down-stream and then cut 500 logs (no mean task single-handed), and opening up his tin tubes he threw away the papers he found in them and bound the tin on the outside of the logs with strips of bamboo and hid the whole in a cave on the bank of the river. It would have been useless for Kintup to have thrown his logs into the river until warning had been sent to India so that watchers could be placed to look out for the arrival of the logs.

Kintup's next care was to see how this could be done. He returned to his master and served him for two months more, after which he asked for permission to visit a holy place called Tsari, which was again granted.

Kintup, in performing the pilgrimage of Tsari, found that on one pass, the Droma La, no woman was allowed to go, and gives the following explanation: "The reason assigned is that formerly a goddess named Dolma, who wished to judge the moral behaviour of men and women, laid herself on the path-way at the summit of the pass. A man came by and found the road blocked by the goddess, who was disguised. So he asked her with kind words to get out of his way. In reply the goddess said, 'My brother, I am so weak that I cannot stir, if you pity me, please find another road, if not, cross over me.' On hearing this the man took a different road. After a short time a woman passed that way and she also saw the goddess and told her to give way, the same reply was made by the goddess, but the woman crossed over her and went on. Therefore from that day women have been forbidden to pass over, and from that day the name of the pass has been known as Dolma La or Droma La."

Years later I visited this holy place, and committed the serious offence of slaying a stag! I begged the people to tell me the best way of expiating this sin, and was told to go and do the pilgrimage, but to be sure that I did not take the life of even the smallest maggot or insect in doing so. The journey round took me eleven days and in due course I reached the Droma La. Having Kintup's little anecdote in my mind, I asked the people the reason for prohibiting women from crossing the pass. An old and crusted monk replied "Well, you know what women are, they lie, they steal, they cause every kind of trouble, commit every sort of crime—we want none of them here!"

Kintup's object in getting permission from his lama-master to go to Tsari was really to get a message sent to India to warn the survey officers to look out for his logs, so after performing the pilgrimage at Tsari he went on to Lhasa where he had the following letter written to the "Chief of the Survey of India"

SIR,—The lama who was sent with me sold me to a Dzongpen as a slave and himself fled away with the Govt things that were in his charge. On account of which the journey proved a bad one, however I, Kintup, have prepared the 500 logs according to the order of the late Captain Harman and am prepared to throw 50 logs per day into the Tsang-po from

Bipung in Pemakoichen, from the 5th to the 15th of the 10th Tibetan month of the year called Chhuluk (water-sheep) of the Tibetan calculation

In Lhasa he found a 'Kazi of Sikkim' to whom he entrusted the letter for delivery to the Surveyor-General through 'Nimsring'. This Nimsring or Nemsing (probably more correctly transliterated Nyima Tsering, meaning Sunday-Long-Life) was the explorer G M N whom Kintup had accompanied some years previously, in his attempt to follow down the mysterious river.

At this point Kintup must have been sorely tempted to give up and return. He had been nearly three years out in Tibet on this hazardous work, he had been betrayed and deserted by his companion, he was not himself a trained explorer, he had already collected a mass of useful information, he had to face a life of slavery with an unknown future. On the other hand, here he was at Lhasa among friends from his native land of Sikkim, and nothing would have been simpler than for him to have walked off with them to his home. He, however, always kept his objective in view. He had to go back and throw those logs into the river. So putting aside all temptation, he returned to his master in the gorges of the Tsangpo. The distance as the crow flies was 250 miles and 'as the beggar 'ops', a great deal longer. He even travelled by another and longer road to collect further information.

He then served his master for another nine months when he again asked permission to perform a pilgrimage to a holy mountain. The Lama now set him free saying, "I am glad to see you visiting the sacred places, so from today I have given you leave to go anywhere you like." He then went back to his cave and on the correct days threw the 500 marked logs into the river. Now that his task was completed he wished to return to India. His nearest road as well as that which would have furthered his object, was to follow down the river to India. This road entered the territories of various tribes whom we call collectively Abors. After working for a month to obtain a little money for the journey, he started. At great risk he penetrated some distance among these savage tribes. At one place he notes that the people are "said to eat dogs, snakes, tigers, leopards, bears, monkeys, etc." At another place he was arrested "but got free by paying 306 anna coins". For a night's shelter he "had to pay a handful of salt to every man and woman that were in the house". Eventually when at a distance of thirty-five miles, as he

guessed, from the frontier of India, he could get no further and was obliged to retrace his steps to Lhasa, whence he reached his home in northern Sikkim. Here owing to the death of his mother he remained ten weeks and finally reached Darjeeling to make his report on November 17, 1884, after an absence of nearly four and a half years.

Two disappointments were in store for him first, Lieut. Harman, the Survey Officer who had trained him and sent him out, had died, secondly, the letter which he had travelled hundreds of miles to despatch from Lhasa, had been received by Nimsring after the date on which Kintup had said he would throw his logs into the river. This being so, Nimsring threw it away and did not trouble to deliver it. As a consequence no one was on the look-out for his marked logs and they doubtless drifted unseen out into the Bay of Bengal.

Other disappointments were in store for poor Kintup. On his arrival in India his story was doubted. He was, of course, paid his bare wage, but no special rewards were given to him and his reports were pigeon-holed until the savage Abors gave trouble in 1911. The reports were then brought out, as they were the only sources of information on the country north of the tribesmen in existence.

It happened that a couple of years later the late Captain Morshead, of the Survey of India, and I were given the opportunity to follow in Kintup's footsteps. It was found that the whole story was remarkably accurate. The educated mind relies largely on the written word—we even make lists of our daily trivial duties. The uneducated mind retains a far surer memory. Which of us with no written note could give details of mileage, approximate size and description and relative position of villages we had visited years ago? Kintup gave these details and, although he occasionally made mistakes in estimating distances, and even in the order in which various places came, the information he brought back was on the whole accurate. We felt that such devotion had been inadequately rewarded and made it our duty to find Kintup if still living.

In the thirty years which had elapsed all trace of him had been lost. He was eventually found working in Darjeeling and was interviewed and his story again obtained from him. As told at that time it varied from the official report of thirty years previously in one or two points, and varied towards further accuracy, which led one to the conclusion that he had been incorrectly reported or



*Lt Col F M Basley*

*Gyala Peni, a snow peak directly over the falls of Shingche Chogye described by Kintup*

translated in 1886

One of the differences was, perhaps, the most important of all. This huge river, proved afterwards to be a mile and a half wide where it flows over the Tibetan plateau, dropped about 8000 ft in a straight-line distance of 100 miles. Falls of immense size might account for this. Kintup's report said, "The Tsangpo is two chains distant from the monastery (Pemakochung) and about two miles off it falls over a cliff called Sinji-chogyal from a height of about 150 ft. There is a big lake at the foot of the falls where rainbows are always observable."

This proved to be untrue, but the name Sinji-chogyal was the clue to this mis-translation of his report. At the village of Gyala a small stream joins the Tsangpo. This stream falls 150 ft over a cliff, and behind the waterfall a deity called Shingche Chogye is carved or painted on the rock. Pilgrims visit this place and consider that they have achieved a success if they can see the god through the falling water. This stream joins the Tsangpo at a quiet portion of the river which might well have been described by Kintup's translator as a 'lake'. This fall of Shingche Chogye was not on the main river at all, and Kintup, when describing the

place to me in 1913, never suggested that it was

And now, what about the fall in the main river? This was also found to exist in the form of a very steep rapid in which rainbows were visible. The river at this point narrows to about 50 yards in width and through this gorge it plunges down steeply some 30 ft. All this Kintup described with great accuracy when he was asked about it in 1913. He even compared the height of the fall to that of the house in which he was sitting as he recounted his adventures.

Kintup was given a further reward and died in comparative comfort a few months later.

Such is a very brief account of one of many stories of the secret exploration of the countries lying along the northern frontier of India. There is something reminiscent of Marco Polo in the calm way in which these men accepted long weary delays of months on end. In giving every praise to Kintup and his like, let us not forget the Survey officers who chose and trained these remarkable men and organized the whole exploration. It was not done in any haphazard way but systematically, so that the accounts of one man could be checked by those of others.

# First Jump

by E G STEVENS

FOR two whole days we had drifted around the hangar and the flying field—waiting for the weather to clear so that we could make our first aircraft jump. Two days of nervous tension which even the increasing boredom of waiting couldn't overcome. Twice we had fitted our 'chutes, with nervous fingers fumbling over buckles and straps, twice we had marched out in emplaning formation to where the black bomber's body was quivering to the feel of its 'revved-up' engines, twice we were turned back by the latest 'met' reports just as we were about to clamber in. And many an anxious moment we had spent watching the fitful wind-sock on the far side of the 'drome, and the long, grey rain-clouds scudding in from the sea.

Now—on the morning of the third day—the clouds were lifting and the merest breath of wind was helping them on their way.

"Fit 'chutes," came the flight-sergeant's voice over the microphone. And the listless hangar came to life with the bustle of men helping each other into their harness. Out on the concrete runway the twin engines of 'W for Willie' roared out a welcome as our 'stick' of ten men followed the instructor towards it. Clambering into its long, sleek fuselage you realized that this was only the second time you had been inside a plane—the first time was on the twenty-minute air-experience trip a few days previously—and that you were now going to jump out of one from several hundred feet. Somehow, it didn't make sense.

Now No. 10 was aboard and everybody in position. The calm-faced sergeant-instructor was going round, hooking up the 'static line' on each man's 'chute to its corresponding line in the fuselage. This was your life-line—the line that held you, after you had left the plane, until your falling body pulled the 'chute from its pack and you were airborne. And you watched yourself being hooked up with a concentration you had been unable to muster for the morning paper in the Naafi a few minutes ago.

"O K, No. 8?" queried the instructor above the roar of the engines. "O K," you yelled back, fingering the massive spring-hook and the strong safety-pin. Suddenly 'W for



*Clambering into the long, sleek fuselage*

Willie' quivered to an even louder note from the engines, as the plane lurched and bumped its way across the rutted grass to the tarmac. Then the lurching ceased as she gathered speed along the smooth runway and in a matter of seconds you felt a lift of the plane and a corresponding sinking feeling in the pit of your stomach. 'W for Willie' was airborne. Very soon now you would be too.

From your half-sitting, half-squatting position on the floor of the plane you could look across the man next to you and down through the gaping aperture through which you would soon be jumping. Below, green fields, trees and hedges, buildings like dolls' houses and tiny figures. Very tiny figures. Don't look down again, you tell yourself, or you will be funkng the drop. You look around the inside of the plane instead—at Nos. 1 and 2, sitting on the edge on opposite sides of the aperture, ready to swing their legs through and jump on the word "Go." Standing over them coolly is the instructor, to whom this is an everyday affair, shouting down at them



*You look around the inside of the plane—at Nos 1 and 2, ready to swing their legs through the aperture and jump at the word “go”*

reassuring remarks and friendly chaff. They smile in response, but you notice that the smile is forced, their bodies tense.

No. 10 on your left wipes his face with his sleeve and yells in your ear “bloody hot in here.” You nod agreement, insert a finger in your collar, fiddle with the quick-release box on your harness, give yet another glance at your hooked-up static line. Supposing the safety-pin is not secured? Supposing that hook should snap? Supposing, after all, your ‘chute won’t open? Don’t talk nonsense. It must open. Supposing, supposing. The plane’s metallic roar pierces your brain and fills your mind with a whirl of suppositions. Your hands, pressed on the fuselage floor to steady yourself against its swaying, are hot and sticky.

Looking up at the instructor you follow the line of his gaze, fixed intently now on the signal-light panel in the roof of the plane, waiting for the flicker of red light which is the pilot’s warning that the dropping area is near. Everybody else in the plane is watching that

panel too, with a tense and nervous fascination. Nobody speaks, nobody moves, except No. 1, who, at a nod from the instructor, edges nearer to the lip of the circular hole and shifts his hands to an even firmer grip.

Any second now—we must be nearly there. But these last few seconds seem an eternity and, expectant as you are, the sudden flash of red light in the roof and the voice of the instructor yelling “Action stations, No. 1!” impinge themselves almost unawares on your keyed-up brain. But No. 1 is ready and in a split second his legs are through the hole, his body poised taut above it, head pressed back, eyes fixed on the instructor’s outstretched hand.

Red light changes to green, and as the instructor brings down his hand (like a school-master starting an egg-and-spoon race is the absurd thought that springs to your mind) his shout of “Go” rises above the engines’ constant roar. As though that downswepthand had severed some invisible line attaching it to the plane, the figure of No. 1 poised above the



*"O K No 8—GO!"—and you are gone, down through the hole into the rustling wind which fastens on your body and tosses it about*

hole disappears into space—and the next thing you are aware of is a startling crash of metal against metal coming from the tail of the plane. Involuntarily you jump, then sigh with relief as you realize it is nothing more than No 1's static line and empty 'washing bag' (parachute pack) being slapped by a hundred-mile-an-hour slipstream against the underside of the fuselage.

Meanwhile the instructor is yelling "Action stations, No 2 go!" and another taut body hurtles through the hole.

This first jump is in 'slow pairs', which means that the plane has to circle the dropping area and make a fresh run-in before Nos 3 and 4 are despatched. Three such journeys must be made before it is No 8's turn, so for a while you can relax, with your legs pressed against one side of the fuselage, the parachute on your back propped against the other. Comes a slight swaying as the plane banks and turns, a few more seconds of steady flying, and then the red light is on again. "Action stations, No 3 go!"

No 4, go!" Relentlessly the instructor's hand sweeps down with each shouted "Go". Relentlessly the plane moves on to the throbbing engines' note, and the six remaining figures left squatting on the fuselage floor relax and breathe again.

Another bank-and-turn, another sinister wink from the red light, and Nos 5 and 6 have gone. Next it will be your turn. You slide nearer the edge of the aperture and look down several hundred feet upon the tree-bordered

grassland of the target area, upon the tiny figures of the ground instructors, upon a patchwork of fields and woods and streams, upon a grey cluster of houses which you recognize as the village of X, upon the symmetrical gardens and smooth-looking lawns of a large country house, and, further on, as the plane passes directly above the large expanse of a parkland lake, upon nothing but water, spark-



ling in the morning sun  
 It is fascinating to look  
 down upon a circle of  
 grey-blue emptiness,  
 and, for a second, ab-  
 sorbed in the beauty  
 of space and sunlight,  
 you have forgotten  
 about parachuting—  
 until the void below  
 gives way again to grass  
 and trees and the in-  
 structor standing above  
 you is roaring "Action  
 stations, No 7" On  
 the other side of the  
 hole, No 7 is swinging  
 his legs into the funnel-  
 shaped opening, and as  
 he drops through, in a  
 perfect exit, to the shout  
 of "Go", you try to  
 murmur "Good luck,  
 I aff" But the words  
 won't come

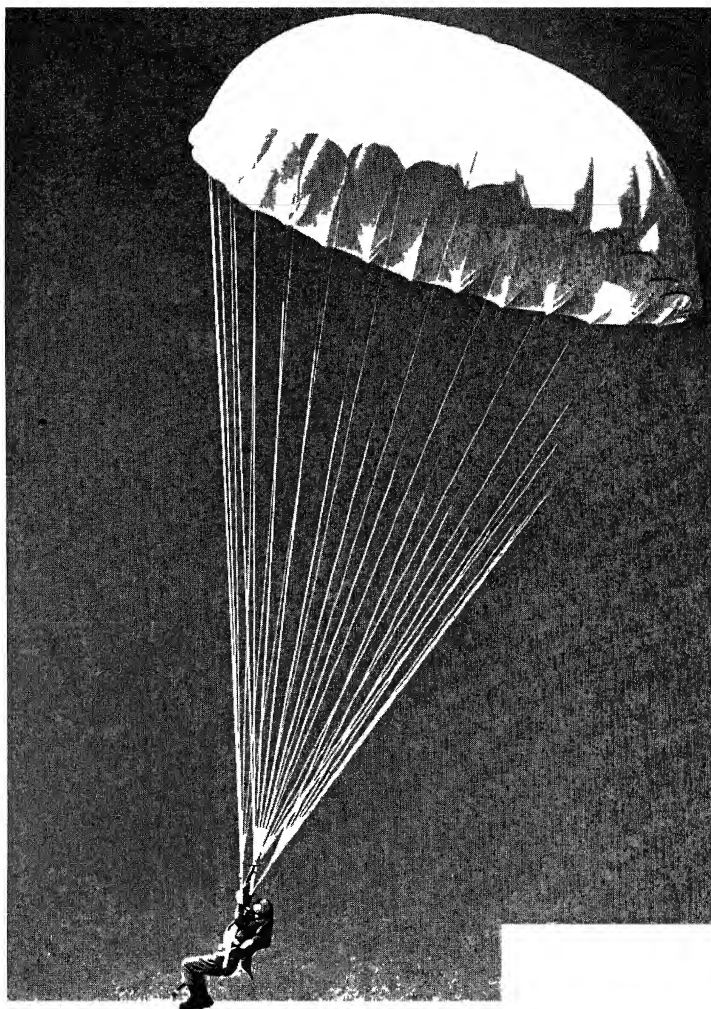
Now at last it is your  
 turn, and in this final  
 second everything is  
 clear, your body obeys  
 automatically all the in-  
 structions which have  
 been drilled into you  
 in the days of prepara-  
 tion for this moment

Feet and knees to-  
 gether legs slightly  
 bent hands at your  
 sides head well up  
 ("Take it steady,  
 No 8") Just imagine  
 you are on the dummy  
 fuselage in the training  
 hangar, with merely a  
 six-foot drop below you  
 onto a coconut mat  
 That's all it is  
 nothing to it really  
 just a "piece of cake"  
 everybody says

so

"O K, No 8—go!"

—and you are gone, down through the  
 hole into the rushing wind of the slipstream  
 which fastens on your body and tosses you,  
 as if by some giant hand, into a somer-  
 sault onto your back You are conscious  
 of your legs being whipped above your  
 head, and of them snapping back again  
 Above you—or is it below?—comes a fleeting  
 glimpse of the plane's silhouette, black against



*You reach up and grasp the lift-straps of your harness and there above  
 you is the smooth sheen of the silken canopy, dazzling white in the  
 sunshine, supporting you lovingly in the still, new world of silence*

blue of sky and white of fleecy cloud, and then  
 a gentle 'plop' as the air rushes into your al-  
 ready open canopy, and the whirling, roaring  
 confusion of your exit is swamped in a sudden  
 silence, a stillness and peace

You reach up to grasp the lift-straps of  
 your harness and there above you is the smooth  
 sheen of the silken canopy, dazzling white in  
 the sunshine, supporting you lovingly in this

still, new world of silence You are alone in this world—just you and your parachute—and there is a breath-taking ecstasy, an other-worldly feeling, in this silent passage through space You want to sing, and whistle, wave and shout You are airborne, and alone

Alone? Not entirely From below, the voice of the ground instructor comes faintly over the microphone, intruding on your ethereal reverie "What the bloody hell, No 8? Don't you know you're coming down backwards! Turn round, No 8 Turn round"

Instinctively your hands cross over on your lift-straps You pull hard, until parachute responds to straining shoulder muscles and you have turned face about Just in time No longer are you floating airily through space You are thirty feet up and the 'deck' is rushing up to meet you in a whirl of green Steady now feet and knees tight together watch the ground hold that turn Bump! You are down and over in a single roll and up again, running round your 'chute before it has time to billow out and whip you

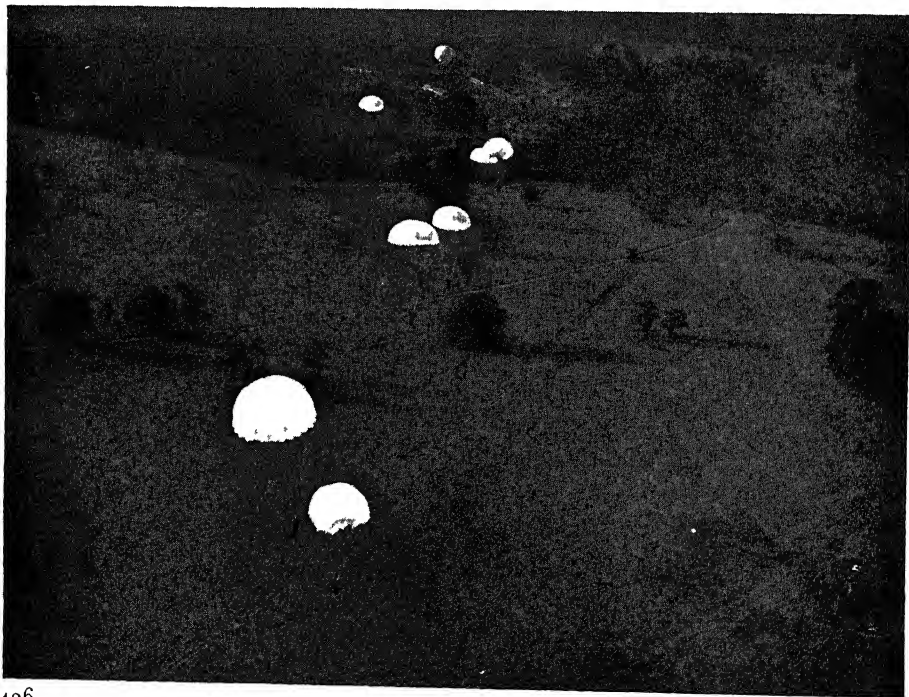
away on a playful gust of wind Out of your harness Roll up your 'chute All over Just as they said it was—"a piece of cake"

\* \* \*

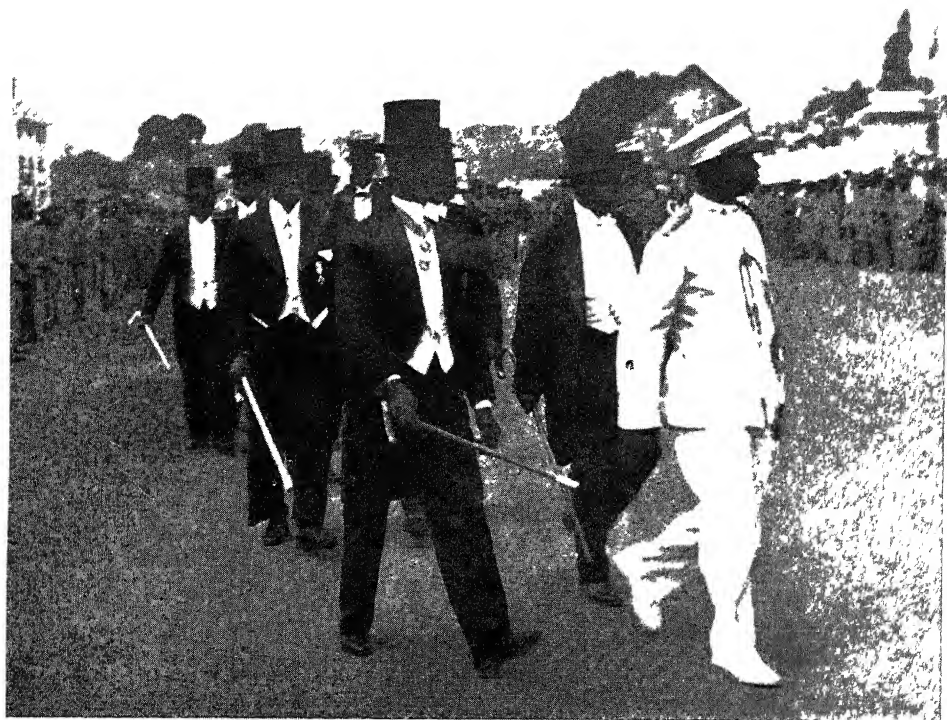
Over at the Y M C A canteen our section officer is passing round, according to his privilege as first man out of the plane, cups of tea, and cakes and cigarettes Everybody is laughing and talking at once, each man telling the next about his amazing exit, his wonderful landing, everybody releasing in a flood of talk the pent-up emotion of the last few minutes

"Cigarette?" asks Lieut P, as Taffy and I join the group Never was a cigarette more welcome "A light?" Lieut P strikes a match, lights his own, then mine, and is passing the match on to Taffy, when a look of horror envelops that Welshman's rugged, Gaelic features Taffy, who a few seconds before dropped unflinchingly through the hole at 800 feet, now seems quite perturbed "No third match, sir, plea-ss-e Put it out, sir, plea-ss-e," he insists of Lieut P in his sing-song voice "You see," he adds, above our laughter, "I am ve-ry super-stitious"

*(Below) No longer are you floating airily through space You are thirty feet up and the 'deck' is rushing to meet you in a whirl of green (Opposite) You are down and over in a single roll and running round to stop your 'chute from billowing out and whipping you away on a playful gust of wind*







# Liberian Landscapes

by MARCEL HOMET

*The author of this article is a Frenchman, who, before the war, undertook many missions in West and Central Africa on behalf of his own, the Belgian and the Portuguese Governments, and carried out research in the interests of various scientific bodies. His visit to Liberia was made in 1937. He recently arrived in London and is now working for the British Government.*



A. R. Lindt

ONE night in 1821 when the first party of immigrant freed slaves from America had been landed on an island off the coast of West Africa and had all, including sentries, fallen asleep, a large fleet of canoes filled with armed warriors from the interior made its way towards them. Not a sound was made. The thousands of warriors who lay in the bottom of the boats, awaiting the moment to leap forward, held their breath. On the island one negress, half asleep, was finishing her pipe. Suddenly, an assegai fell against a lance. At the sound, slight as it was, the negress started up, she saw what was coming, and in her fright let fall her pipe, which dropped into a



A. R. L. L. L.

(Opposite) *Liberian Senators on their way to Parliament* In Monrovia, a corner of which is seen in the small picture, two storeys are considered essential by civilized Liberians, whether in houses such as these or in fine stone palaces (Above) A paramount chief of a group of tribes of the interior

powder cask standing open beside her. The effect of the explosion can be imagined. The negroess and her pipe were blown to atoms, the defenders were awakened, and the attackers, appalled by this totally unexpected piece of sorcery, fled as fast as their canoes would carry them. And to this day the people of Monrovia respect the memory of their heroine, the unknown woman with her pipe whose providential carelessness made it possible for the Negro Republic to come into being.

The State of Liberia came into existence as the result of a generous act on the part of the American Colonization Society, beginning in a modest way on the coast, which Frenchmen from Dieppe had first discovered in the 14th century. The United States continued to take an interest in the colony. In 1824 the Rev. Robert Gurley came to assist it, and it was he who gave it the name of Liberia, to

commemorate the fact that its inhabitants were descended from slaves who had been set free. In 1833 another State was formed, the Independent African State of Maryland, and later incorporated in the new Republic. The successive Governors of the Republic, and its Presidents, the first of whom was Joseph Jenkins Roberts, had to defend it against the imperialistic designs of its neighbours: cannibal tribes on the one hand and Germans on the other. The latter were far the more formidable. In 1911 they contented themselves with sending the *Panther* to Monrovia at the time of its famous cruise to Agadir, but in 1914 they succeeded in carrying out a sort of occupation, and were driven out only in 1917 by the British and the Americans.

After the independence of Liberia had been recognized by France and Great Britain in 1848, and by the United States in 1862, its



history was peaceful—at least in the coastal belt, some twenty-five miles wide, the only part of the country open to foreigners. The majority of these are the American employees of 'Firestone', an American firm which has established huge rubber plantations on its million-acre concession. But next to the Americans, the predominant element consists of Germans who have returned in large numbers. And they are no ordinary settlers, for they include naval officers of high rank and hydrographic engineers working often as commonplace shopkeepers.

In 1937 I made a tour of investigation of Liberia which took me to districts not often visited by Europeans. I must confess that in making my tour I was contravening Liberian law, and rendered myself liable to imprisonment. Although the Liberian police and army have been reorganized by American officers, and though the Monrovia Government gives constant evidence both of its authority and of its good intentions, it is none the less true that in the whole country there are only some 30,000 real Liberians—*i.e.* immigrants—as against some two million Africans, whose civilization proceeds very slowly. And, by a scruple which is to the credit both of the Senate and Chamber of Deputies and of the President of the Liberian Republic, white men—with the exception of a few American missionaries whose self-sacrifice deserves all admiration—are formally prohibited from entering the interior of the country. For this reason I did not go in by way of the coast, for I should at once have been arrested. It was from Macenta in French Guinea, where I was carrying out an official tour of investigation for the French Government, that I entered the forbidden territory.

In a three-weeks march I covered, on foot, 150 miles of wild, rocky country, at first through mountains of over 3000 feet, with precipices down which plunged foaming torrents, a landscape of savage grandeur. Here I was among the tribe of the Tomas, whose ritual dances are performed by men dressed in a complete covering of eagle, hawk and pheasant feathers, arranged in the most curious way, their faces painted with white clay. The dancers, standing in couples face to face, mime an ancient ritual dance of love. Further on the scenery became less rugged, I had come into the Guerze country, where I saw the marvellous bend of the Vea River, which winds in voluptuous curves through a setting of palm trees, its crystal-clear waters flowing over golden sands.

I had a great many disappointments over

those sands. For Liberia is full of gold and diamonds. At every beach I took up some of the sand in a pan which I revolved. Unfortunately I had no luck as a prospector, when I had finished I was no richer than when I started, for the water had carried away the whole contents of the pan!

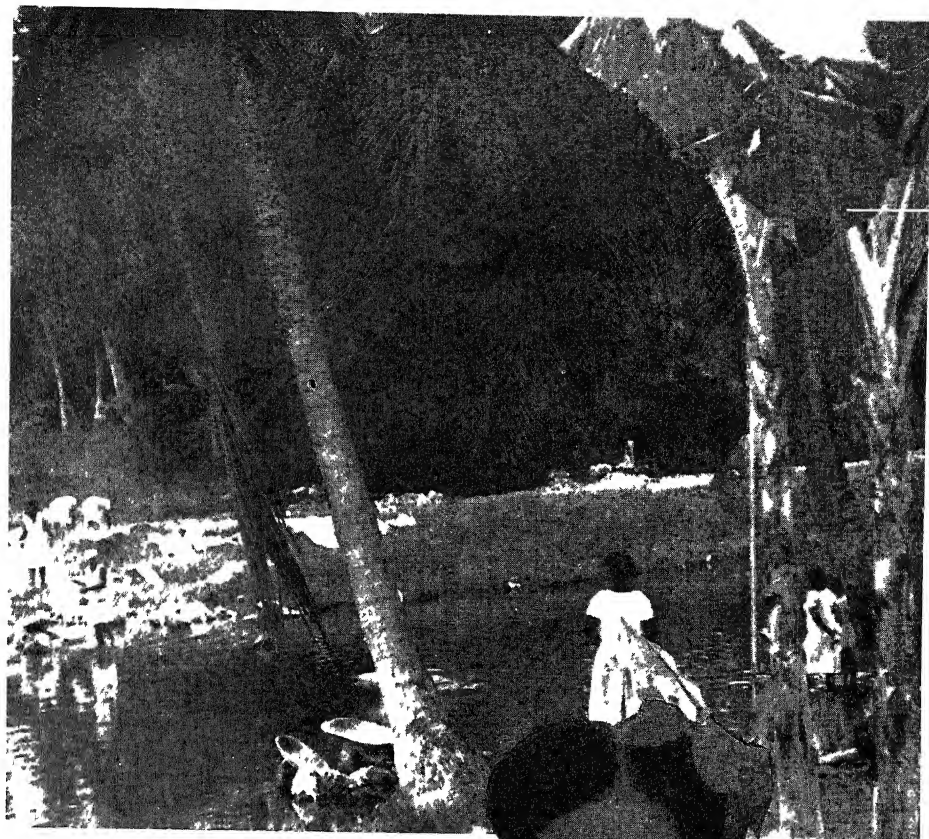
To the reader sitting comfortably by his fireside such a journey must sound pleasant. And so I found it, taking it all in all, as an explorer who has spent nearly twenty years wandering in remote districts of Africa and Arabia. But there were times when it was not so pleasant. For example, the only way to cross some of the big rivers is by monkey bridges', slung, most ingeniously, between two giant forest trees at a height of about 30 or 40 feet. The bridges are mainly composed of three strands of liana, each as thick as a man's wrist, one for the feet, the other two for the hands. Here and there they are linked by other, thinner strands of liana, these are dry and constantly break. The trees from which the bridge is suspended sway in the wind, and this makes the lianas, sometimes as much as 120 or 150 feet long, swing sideways, often over a distance of six to nine feet. When that happens it is better not to look down if you do not want to turn giddy, and you must not miss the middle cable with your feet. For below you, on flat rocks emerging from the water, you can see some hundreds of great triangular teeth shining in the sun. They belong to basking crocodiles.

The Guerzes are almost unknown outside their own country—which is shown on no map that I know of, and their "Brotherhood of the Devil" seems to be entirely unknown. This is a secret society some of whose members have affiliations with the Society of the Leopard-Men, whose acquaintance I made some fifteen years previously not far from the sources of the Nile.

The Guerzes are deeply imbued with fetish-worship, they have practically no knowledge of white men except for the few American missionaries who pass that way from time to time, and generally do not stay.

I remember one night in particular, I was lying, rolled in a blanket, on the hard floor of the hut which the village headman had allotted to me. Before my closed eyes there passed dream-images of the paintings which I had been admiring a few hours before. First of all there was a sort of huge sea-serpent with an extraordinarily shaggy head, then a dragon with legs and three heads, each with a yellow face and almond eyes, and wearing a small, black, pointed cap, quite Annamite in





Marcel Homet

*A grove of coconut palms near the coast, which is generally bound by cliffs or fringed with mangrove swamps. The girl sets off her natural charms with a hibiscus flower*

style. Finally there were two extraordinary figures with ten heads—yellow too—on the body of a fish with legs, the very picture of an Indian Vishnu. All these figures were passing through my head when, hearing a noise, I woke up, and the beam of my electric torch fell upon a monstrous statue carved in black wood with four arms, two legs and two faces which were surmounted by tall Siamese head-dresses, and were grinning at me from a corner. In other corners of the hut obscene carved figures gazed at me, while from an





*A. R. Lindt*



*From a drawing by the Author*

immense cooking-pot there rose the sickly odour of decaying meat

One day the 'King of the Brotherhood of the Devil' sent for me. I went to see him. Covered with semicircular bands of white paint, his head surmounted by a sort of tiara on which a human head was represented in white paint, he was a demoniac figure.

One night I was awakened by hundreds of

(Above) A northern Liberian tribe provide their 'bush devil' with a special hut on the outskirts of their village. It is ornamented with frescoes and clay reliefs. (Left) Incarnation of a devil painted on the walls of a hut. (Opposite) The herald of a tribal war-dance wears a head-dress of bullock horns, with a female image imposed, and smears his body with chalk.

warriors, painted in all sorts of colours, their heads covered with feathers. In their hands they carried torches, bows and arrows, and assegais, and they danced in silence around my hut. It was like a spectral vision.

After the Guerzes have been left behind, the character of the country changes, there are great windswept plateaux. The crops are different too: there are manioc, wild cotton, oil-bearing palms, raffia palms and maize, everywhere are herds of black pigs and the little, agile goats found in all parts of Africa. The villages are built on piles, and the huts have enclosed beds like those to be seen in Brittany. A curious feature is that there are no mosquitoes.

On reaching the plains, one encounters





unbearable heat, mosquitoes, and the tsetse fly which carries the dreaded sleeping sickness. There are immense tracks in the gigantic forests, made by the thousands of elephant, buffalo and rhinoceros which we continually heard passing not far from us, they were, however, quite peaceful, as were the panthers and leopards which abound.

Finally, one reaches the coastal belt, and civilization. Monrovia, the capital, has 10,000 inhabitants, who have paid a delicate compliment to the two great Republics of the world by laying out a 'Place de la Concorde' and a 'Broadway'.

One day, coming round a bend in the path at the town of Kakata, I came upon black men, spade and pick in hand, working—rather slowly—on a magnificent road. There were motor lorries, and reinforced concrete bridges were being built. "Who," I asked, "is the owner of the splendid house which dominates the whole landscape in this town where white men are not allowed?" "The representative of the *Woermanns Linie*," was the answer. The *Woermanns Linie* is a German shipping line, and on the door of its representative's house was pinned up a German map of Africa on which all the former German possessions were marked as belonging to the Reich—in 1938. I naturally wondered what a shipping line was doing forty miles inland. The Germans failed to get Liberia in 1911, they were driven out in 1917. But they came back. This is how it happened.

Iron ore is mined in French Guinea, near the Liberian border. In January 1939 a high official of the French Ministry of Foreign Affairs gave the Reich a concession for them. In Liberia, too, there are mines of this kind, exactly 130 kilometres north of Monrovia, in addition there are considerable deposits of diamonds, while the rivers are rich in gold. In 1938, in spite of the conventions binding Liberia to the United States, Berlin made an attempt to secure possession of this wealth. This was the meaning of the famous contract which Mr Barclay, the present President of the Black Republic, had the patriotic courage to declare null and void as soon as he learned of its existence. Its provisions were as follows:

The 'Western Province' is situated to the north-west of the Diani or St Paul River, which divides the area into two parts of unequal size. On the coast there is a fine lagoon, on the shore of which a little town, Roberts Port, has been established. If the lagoon were dredged and quays built, it

would make an admirable naval base. As there are quantities of palms, it would be possible to manufacture 100 per cent rectified oil for the Diesel engines of submarines. Then a railway of 130 kilometres would be built from Monrovia, the capital—which would be modernized—to the iron mines, and soon the whole colony would come under Hitler's sway. In order to bring this about, prospectors would be sent to distribute bribes, they would set up shops like the one in Monrovia, which is the largest in the town and which has six obsequious clerks—white men with round, rosy, close-shaven heads.

German cargo vessels touched at Monrovia and Cape Palmas, while I was there, and in all the bays and inlets of the coast, negroes wearing the uniform of the *Woermanns Linie* took careful soundings, while white men (all of them naval officers on special leave) noted down the necessary particulars in thick notebooks.

I embarked at Monrovia on a fine British cargo ship, where—if my British friends will excuse my saying so—the food was very bad and we drank water, and went ashore at Cape Palmas in the south of the country. On my departure, as on my arrival, negro seamen wearing German uniform took me across in their boats.

In 1917 British naval forces gave support to Liberia, which was in danger of being strangled in the grip of Germany. In 1942 it was the Americans, the generous founders of the Negro Republic, who came to the rescue of their adopted sons. The free world should be grateful to them for their action.



Stanford London

*'Monkey bridges' made of lianas span many Liberian rivers*





# ‘Our Mothers’

## The Amazons of Dahomey

by EVA L R MEYEROWITZ

WHEN I passed through Abomey, the capital of Dahomey on the west coast of Africa, I saw the only ‘Amazon’ still alive. In her youth she fought against the French in the wars of 1894 to 1898 and is now a very old woman, hanging around the courtyards of the former royal palace. She has a terrible face, and one wonders what memories lie behind it.

In 1942 we have become accustomed to women in uniform, and there appears to be no limit to the range of work they can do, with one important exception that they remain ultimately non-combatant. Things were different in the ancient kingdom of Dahomey, which at one time prided itself on an efficient female military force. The women were trained to fight, to kill the enemy and to bring

back from the battlefield, as a token of their prowess, heads or jaw-bones of the slain.

This force, called by the Europeans ‘the Amazon Corps of Dahomey’, was known in the Dahomeyan kingdom by the title of ‘Our Mothers’ or simply as the ‘King’s Wives’. It was first raised about the year 1729, when a body of women who had been armed and furnished with banners, merely as a stratagem to make the attacking force appear larger, behaved with such unexpected gallantry that a permanent corps of women was instituted. Nevertheless only women who were criminals were recruited: criminals in the Dahomeyan sense of the word, termagants, wives detected in adultery or simply women given to the king as deserving death for some misdemeanour.





*Photographs from Margot Lubinski*

(Opposite) *Survivors of the three thousand Amazons who fought for the King of Dahomey in 1894*  
 (Above) *Dahomey girls of today with elaborate coiffures of tightly twisted pigtails*

A change was made in the middle of last century when King Ghezo raised the Corps from a subsidiary position to a status equal, if not superior, to that of the men, and reorganized it so efficiently that under him it attained its greatest prestige. He was so bold as to introduce conscription for women, and personally supervised the recruiting, from time to time issuing a decree summoning every subject on an appointed day to present his daughters above a certain age at court. There he selected the most promising girls of the aristocracy and made them officers, while the others became ordinary soldiers. The daughters of slave parents became the slaves of the Amazons.

The Corps itself he divided into three brigades, the King's or Central Company, the Right and the Left Wings. Each of these brigades was again divided into four parts with a captain and numerous lieutenants to

each. First there were the Veterans of the army, only called into action upon urgent need. Their manner of fighting was ruthless and ferocious, according to the traveller Skertchly, who visited Dahomey in 1874, "such as cutting an enemy to mincemeat or blowing him into fragments by a single discharge of a musket." Secondly, there were the Elephant Huntresses, most celebrated 'soldiers' of the force, used in peace-time for hunting expeditions. Thirdly, the Archeresses, to which the youngest and prettiest girls of the Corps were drafted and who therefore formed the Parade Corps. They were armed with a peculiar bow the quiver of which contained poisoned cane shafts. In the field they were mostly used as scouts and porters, carrying the wounded into the rear. Fourthly, the Musketeers armed with flint muskets who formed the main body of the army. A special feature were the Razor

Women, of whom there were only a few to each wing, they had the peculiar duty of killing the king of the enemy, for whose decapitation King Ghezo had designed a razor-shaped weapon with a blade about eighteen inches long shutting into a wooden handle. These special units also had to inspire terror.

In order to keep up the efficiency of these women soldiers, the kings thought it best for them not to marry, so they were condemned to celibacy. To ensure this, they were closely guarded by eunuchs and their barracks placed within the palace enclosure. Amazons, who in spite of all these precautions took lovers, were, with their partners, ruthlessly put to death. The kings were the only exception to this rule and generally kept several of the women as concubines.

To keep the soldiers' thoughts on military matters, manoeuvres were frequently held, and villages with walls and stockades were erected to teach them to disregard obstacles, danger, wounds and death itself, shock troops, they were trained on the lines of our commandos of today. They learned to display a ferocious courage which carried all before it, and the Corps had a great reputation for valour.

Europeans who witnessed parades and manoeuvres during the last century estimated the strength of the Corps to be somewhere between 2500 and 12,000. Skeetchly thought that 4000 was probably the correct number, but he visited Dahomey ten years after the flower of the Corps had perished under the walls of the Nigerian town of Abeokuta, where the Dahomeyans suffered a disastrous defeat in 1864.

The Royal Palace of Abomey, since the abolition of the monarchy partly used as a museum, contains the remnants of treasures and insignias of the Dahomeyan kings, the fetishes of the God of War and royal funeral paraphernalia. Rummaging in a back room which was full of all kinds of odds and ends, I found bits of uniforms which once belonged to members of the Amazon Corps, consisting of tunics, short striped trousers, crossbelts and skull caps with the regimental badges. I held in my hand a cap marked with the blue cross of the crocodile regiment. There was also a number of skull trophies made into regimental standards, human skulls tied with embossed silver bands, surmounted by a horse's tail impaled upon a staff. These were used by 'Our Mothers' in victory dances after the battles.



*Top of a staff made of a human skull, horse-hair and beaten silver. It was used in a dance celebrating a victorious battle by the Amazon wives of the king of Dahomey. Below are the barracks occupied by the Amazons, who were fully trained as a military force.*



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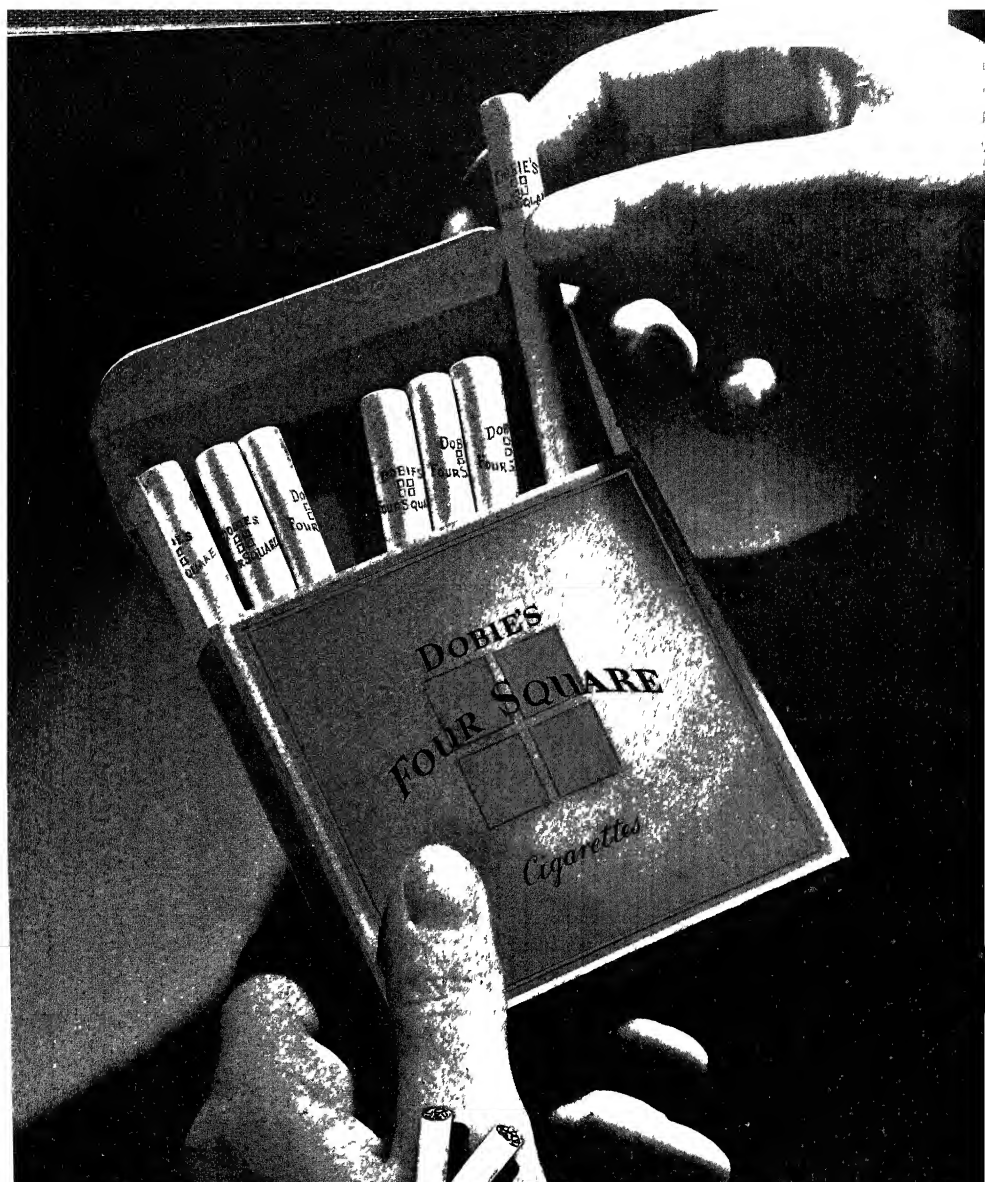
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*Black Star*

# Old and New in Tunisia

by W M COUSINS

SIXTY years ago Tunis was a semi-independent Moslem state, decayed, exhausted, bankrupt, but the repository of a once-brilliant civilization that had flourished for thirteen hundred years. In 1881 the country entered upon a new era, it became a Protectorate of France. A curious diarchy

was then devised, the ancient Moslem law was retained, and a French colonial administration was imposed above it. Thus, the Bey, Sidi Mohammed el Monsef Pasha, remained Possessor of the Realm of Tunis, with royal honours such as are paid to an independent prince, but all Beylical Decrees used to

be countersigned by the French Résident Général, who exercised a right of veto. The Bey retained his Wazirate—the Grand Wazir, the Wazir of Justice, the Wazir of the Pen—but the Résident General controlled Foreign Relations, and officials sent from France took charge of Defence, Public Finance and all recent developments in Agriculture and Science. Provincial administration was entrusted to Caid, Kalfas and Sheikhs, a hierarchy of governors and village headmen, but every Caid was under the charge of a French Controleur Civil, who kept watch from his office at Tunis or Bizerta, El Kef, Sousse or Sfax. Justice was also duplicated, cases between Moslems were judged by Koranic Law in front of the Cadi, while cases in which Europeans were involved were tried in a French court of law.

There were also two roads in education. The Koranic schools survived under the shadow of the mosque, where little Moslem boys, seated cross-legged on the floor, learnt to read and write in Arabic and to recite the Koran, from these they could pass on, through purely Moslem institutions of learning, to the Medersa ez-Zitouna at Tunis, a college of University standing which teaches an ancient Arabic lore akin to the curriculum of El Azhar in Cairo. The Moslem boy could, if he chose, attend the École Franco-Arabe, a school that teaches young Tunisians to speak and write in French, using the methods of a junior High School, thence he could pass on, like the French child, to a Lycee, or to a Technical College. The Old and New Learning stood side by side, offering their rival claims to Tunisian youth.

This dual organization was cumbersome and costly, for it demanded the duplication of every public post, but it has had the merit of preserving intact the Tunisian sense of nationality, while leading the people gently through a period of rapid and inevitable transition. Hence the French and Moslem worlds coexist in the same city, one in the *medina* (Arabic for 'city'), the other in the suburban square, they are not unfriendly, but each group maintains strictly its traditional mode of life.

French settlement has been mainly in the north. The north-western corner of Tunisia is fertile, with a good rainfall, the moist, vine-clad valleys are encircled by mountains covered with cork forests which stretch in grey-green sheets of woodland beyond the frontiers of Algeria. The Allied troops, advancing from the west, moved along the winding coastal road at the foot of these mountains. They found Algeria well supplied



*Black Star*

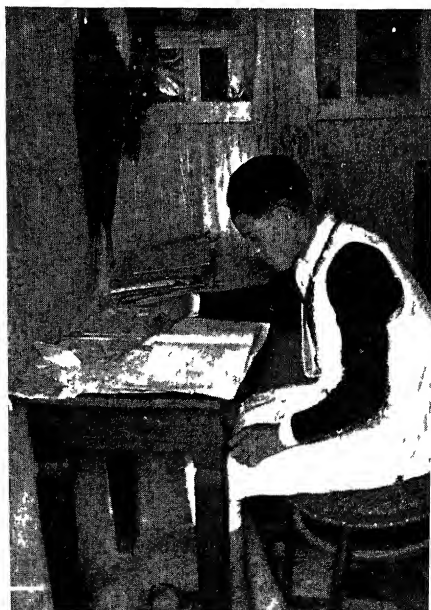
*At an Official Reception in Tunis the Court Notary of the Bey wears uniform, but the dignitary from the South appears in the graceful robes worn by Moslems from time immemorial*



*Toni Muir*



*Black Star*



(Top) 'Mr Deeds' comes to Tunis. Arabs in the qahouat (cafe) discuss the latest film from Hollywood. (Above) The young apprentice learns the old Tunisian craft of metal-work, while (right) the student studies his modern French text-books.

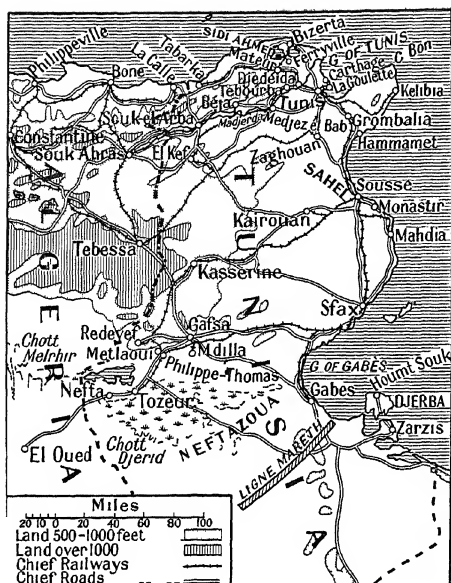






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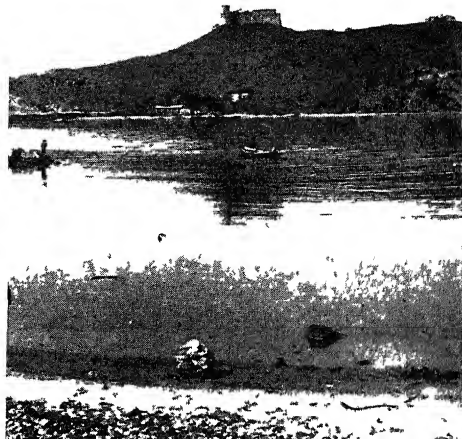
(Opposite) *Summer Palace of the Bey of Tunis* (Above) *Fondouk (inn for caravans) on the island of Djerba* In the courtyard countrymen may leave their pack animals while vending their wares in the market, returning only to sleep on the bare boards of the small cell-like rooms on the upper floor The market, once the greatest in Southern Tunisia, is now a small country affair, attended by local farmers Djerba, though a small island, is of great fertility, famous for olives and corn



with seaports and on that steep, indented shore numerous bays that were used for landing supplies Bougie, Philippeville, Bône, La Calle. Beyond the Tunisian frontier is the last of that series of small but beautiful ports, Tabarka.

This sleepy little town, smothered in vines and mulberry trees, wakes up once a year for the Fête de la Langouste, when gourmets gather from far and near to taste the harvest of the sea. The harbour is sheltered by an island crowned with an ancient castle, built in the 16th century by merchants of Genoa who came to fish for coral along this alien shore. Coral fishers use the port to this day, though now their industry is much decayed, for the world has lost interest in the 'precious coral' of the Mediterranean. Formerly the island was joined to the land by a stone causeway, but for the better protection of the castle, now used as a lighthouse, the stone-work has been broken down. A rough jetty, a beach, a broken wall—this comprises the port of Tabarka, the best harbour on the north coast of Tunisia.

The village consists entirely of French buildings, a Catholic church, famous as the "église souterraine de Tabarka", has been constructed in an ancient Roman vault. The landscape is dotted with pleasant country houses, the homes of the French colonists. But on market days Africa is uppermost, when the square is filled with peasants who come to sell their wares under the mulberry trees

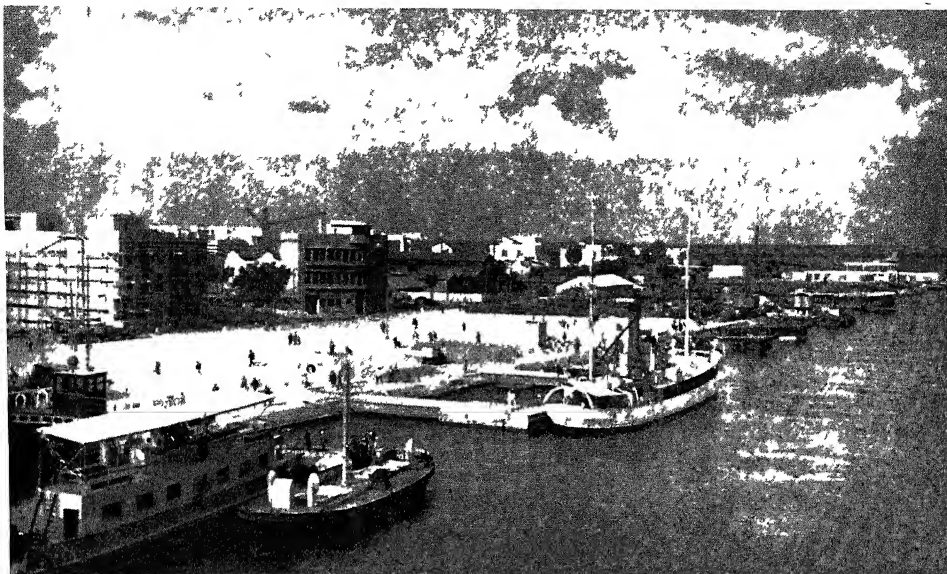


*The medieval castle at Tabarka, now used as a lighthouse, was built by the merchants of Genoa to protect their trading-posts*

Kabyles from Algeria, whose women walk unveiled, and shy Khoumirs from the mountains, the poorest and most backward people in Tunisia. If a man walks in the depth of the cork forest, though he may believe he is alone, he is sure presently to spy a Khoumir, like an elf, peeping at him from behind a tree.

Bizerta today is an important seaport. Situated at the neck of the Mediterranean, where Africa draws nearest to Europe, it commands the narrow seas. Within the curve of a bay stands the well-built modern town, spacious and clean. Behind it lies the Lac de Bizerte, a salt lagoon of forty-five square miles and so deep that our largest battleships could enter as far as the arsenal of Sidi Abdullah. At the close of the last war this lake saw a gathering of 140 warships, and the French used to boast that all the navies of the world could float within its bounds. It is approached by a canal, cut straight through the town, making in all eight miles of deep waterways from the open sea to the recesses of the lake. Originally only thirty-two feet deep, this channel has been enlarged by dredging to a depth of forty feet, the surface width at the most constricted point is 270 yards, with over 200 yards at the bottom.





P G Luck

*A corner of Bizerta's fine harbour The canal, lined with docks and quays, leads from the outer harbour to the Lake, giving access to the naval base*

These measurements compare favourably with the narrower reaches of the Panama Canal. Lined with quays, flanked by buildings, warehouses and greenery, the channel expands into the Bay of Sibra, a large pool of deep water offering an almost unlimited dock space for commercial vessels. The Naval Station, on the southern shore of the lake, one of the best-equipped colonial ports in the world, is furnished with a dry-dock and facilities for refuelling and repair. Stores of munitions are hidden in rock-chambers 60 feet underground. The military aerodrome at Sidi Ahmed and the seaplane base at Karouba are among the most modern in Africa, and are supplemented by a civil airport.

Italian commercial influence is strong in Bizerta, but the Administrative Division, including Ferryville—Bizerta's "dormitory" suburb—is French in language and in blood. Italians form a large part of the European group in Tunis and in Bizerta, in the capital outnumbering French residents, and a large and crowded section of the city in the region of the docks is known as "la Petite Sicile". Italian farmers have settled in large numbers in the Cap Bon Peninsula, a pleasant fertile country of gardens and orchards, and also

around Grombalia at the foot of Zaghouan. Here they cultivate the vine, and acres of spruce vineyards surround their neat little whitewashed houses. The Italian farmer is a peasant and his women-folk work beside him in the fields, but the French colonist is a farming squire, an employer of labour, with a much higher standard of living and wealth. For this reason the Tunisian farmer is jealous of the Italian settler, who competes with the native in his own manner of living, but he has little resentment against the French *colon*, who brings capital into a country desperately in need of development. But not all Italian settlers are pro-Axis in sentiment, many are descendants of families that left Sicily three generations ago and have long disapproved of the political methods of Mussolini.

Tunis is perhaps the worst natural harbour in the world. This ancient town, a Punic settlement older than Carthage, was founded on the landward edge of a wide lagoon, so shallow that it cuts off the city from the sea more effectively than five miles of dry ground. Across the lake, El Bahira, French engineers have constructed a canal, eight kilometres long and twenty-two feet deep, leading from the water-front to the open sea. Great banks of earth protect the channel against the



*Black Star*



muddy waters of the Bahira, and upon one of these runs a light railway connecting Tunis with La Goulette and with the airport, and also with the military aerodrome at Aouina, upon the north shore of the lake. Until 1939 the Grand Bassin Central at Tunis could accommodate only ships of less than three thousand tons, but just before the war it was deepened, to the triumph of Tunis, to receive vessels up to five and six thousand tons. These natural difficulties compelled the development of the port of La Goulette, on the seaward side of the lagoon, near the ruins of Carthage, this fine harbour has an anchorage of considerable depth, but it affords little protection against the north-east winds which in winter sweep the Gulf of Tunis with tornado strength.

In spite of an almost ludicrous lack of natural advantages, Tunis is a brisk commercial port. The French town has an air of prosperous energy and a widespread suburban area of villas, at Carthage, Ariana

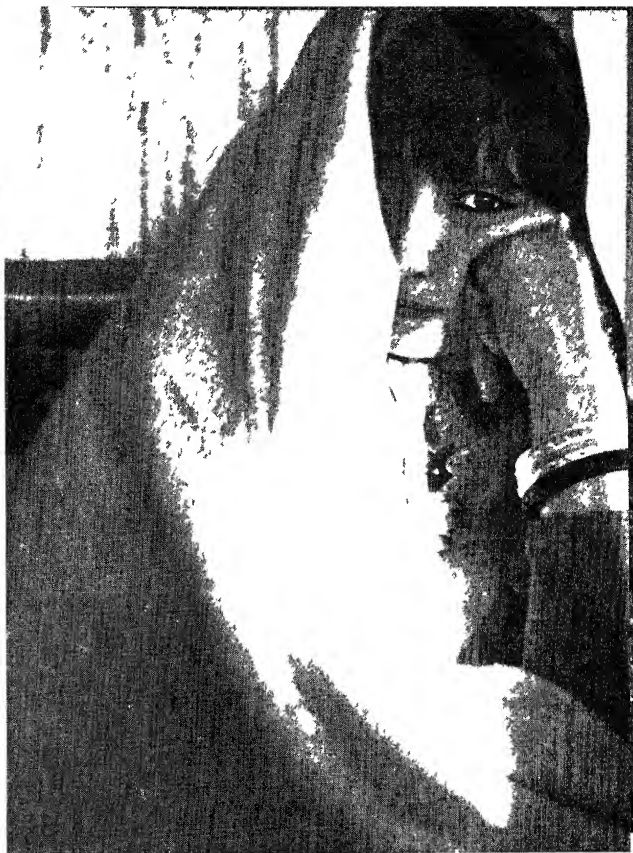
and Mutuelleville. A central street, the Avenue Jules Ferry, leads to one of the ancient city gates, outside the gate is a large European town of cinemas and shops and substantial office buildings of reinforced concrete, within the gates lie the souks and dark, unchanging Moslem world.

The valley of the Madjerda basin in which Tunis lies is rich in corn, and its hillsides have been under cultivation for perhaps three thousand years. The Numidians established farms upon the mountains and have left monumental stones inscribed in their curious ancient script. Punic overlords exacted toll from them. The Romans knew the district as Zeugitana and found it "a second Egypt", and it still produces nearly half a million metric tons a year of barley, wheat and oats. The valley is not now so populous as when the Roman cities, arrogant and rich, were dotted five miles apart over the whole land, indeed the population must now be less than one-tenth of that of Roman days. Yet it is



Tom Muir

(Opposite, top) Tunis from the Dar-el-Bey showing the Mosque Ez-Zitouna, (below) the Sponging-Fleet at Sfax qaribs, the traditional fishing-craft of Tunisia, shelter in the modern port, (right) in the oasis of Gabès gardens of date palms grow (Above) Near Medjez-el-Bab an up-to-date machine cuts and threshes the wheat on the farm of a French 'Colon' (Right) In the Bus this Arab lady from Gabès veils her face from the eyes of male passengers (Below) Tunisian peasant farmer



Black Star

fertile still and studded with a few lonely, small, half-modernized Arab towns El Kel, the City of the Rock, hanging like a rook's nest in a grove of trees, Souk-el-Arba', where the stoiks build, and Beja, centre of the corn country, a city that boasted in medieval times she could send away a thousand camel-loads of grain daily yet never feel a dearth Half-way down the valley is Medjez-el-Bab, an ugly little modern town which stands sentinel over an antique bridge thrown across the swirling waters of the Medjerda It looks like a township on the bleak fields of Manitoba rather than a Tunisian town Round a depressing central square cluster the public buildings and banks, beyond them, under



spindly trees, stand a couple of red-roofed villas and the military barracks. All around stretch the flat plough-lands of the rich valley bottom. Though small, it is in a humble way a wealthy place, and a great centre of activity for French colonists.

South of Cap Bon lie a string of Tunisian outposts—Hammamet, Monastir, Sousse and Sfax. Sousse is a charming little town, sheltered from the north-east winds and from the sirocco, it lies in the most fertile part of the Sahel. Up the side of the hill straggles the quaint little medina, crowned with a *kasbah* now used as a museum, all around is a huddle of French holiday houses and a line of palms adorns the water's edge. This is the halting-place for pilgrims bound for the most famous shrine in Africa, the Holy City of Karouan. "The holiest city on earth is Mecca," say the Arabs, "and the next is Medina, and the third is Jerusalem, but the fourth is Karouan", and seven pilgrimages to Karouan are worth one to Mecca. Strangers gather from all parts of the Moslem world to say a prayer in the Mosque of Sidi Oqba, the hero who conquered Africa in the name of The Faith.

In Tunisia the modern spirit is stirring, but nothing has shaken the hold of the Moslem Church upon the people, nor have they lost their old, quasi-religious superstitions. No women are yet released from the tyranny of the veil, and married women still keep themselves invisible to men. They can tell strange legends of ghouls and of djinns, and all wear silver charms to avert the Evil Eye. The Fish, the Hand of Fatima—these symbols of protection are still made, and every child must wear them lest he fall ill.

Sfax is the commercial capital of Tunisia, the phosphate port, connected by rail with the rich deposits at Metlaoui, it is also the centre of a large, rather forced, development of the olive-growing industry and of the native sponge-fisheries. The small French quarter, which appears to consist entirely of offices and banks, controls enormous wealth, it is built around a dark, fanatical Arab medina. The narrow-gauge railway, owned by the Compagnie des Phosphates, brings down the mineral ore from the interior.

The phosphates are mined, not, as is sometimes stated, at Gafsa, but at Redeyef and Mdilla, and especially at a small mining town called Metlaoui-Philippe-Thomas, a few miles from the Gafsa oasis. The rails run straight into the mine, where the level galleries enter the side of the hill, ore is shovelled from the rock-face into the mechanical tilting-trucks, which roll down to the

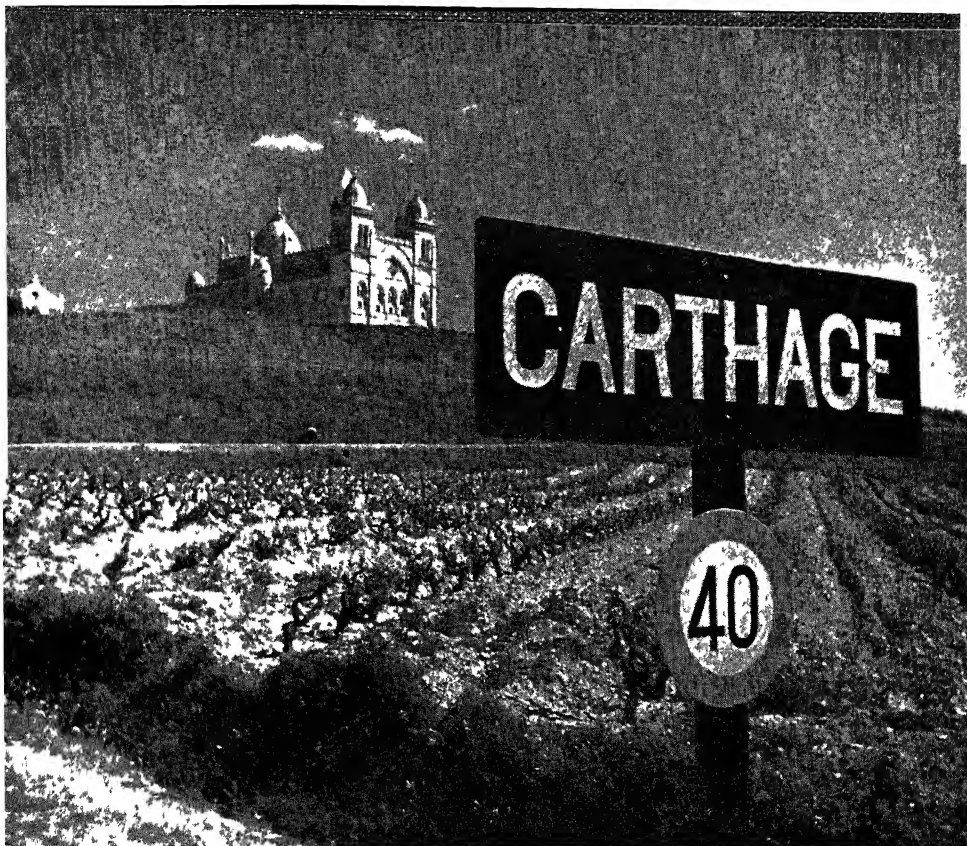
quays of Sfax and discharge their burden into the ship's hold. The Company, before the war regarded as one of the richest in the world, makes use of every labour-saving device known to science.

A few miles thence the ancient city of Gafsa clings to its lion-coloured hill, it is a noble city, even in decay, adorned by a gigantic *kasbah* and a famous mosque built of Roman columns and of inscribed and carved stones. Metlaoui is a cluster of weather-board houses on a high bleak veldt, Gafsa is a walled city in an oasis of palms. Fortress of the Romans, it is now forgotten and has no exports beyond dates and fruits from its orchards and tissues woven by its women, Metlaoui sends out annually nearly one and a half million tons of phosphate ore, and creates the lion's share of the wealth of Tunisia.

South of Sfax lies an underwater shelf of sand extending beyond the island of Djerba and blanketing part of the Tripolitan coast, thus the southern ports—Gabès, Houmt-Souk, Djorf and Zarzis—are surrounded by shallow water.

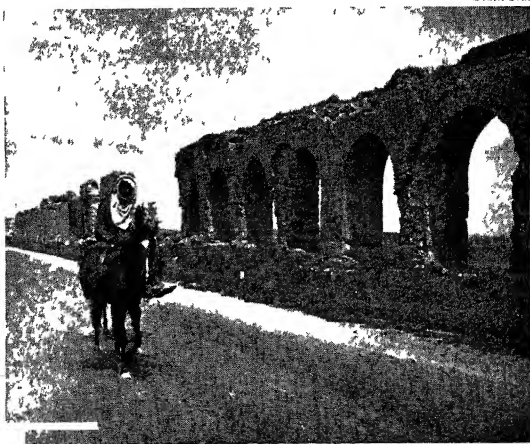
The port of Gabès serves the Ligne Mareth, the elaborate defence erected by the French military authorities for the protection of southern Tunisia. The true Gabès is an oasis town which owes its existence to a river of fresh water that wells out of the sand and creates in its path a small pocket of fertility. Sheer as a wall, a grove of palm trees rises from the desert, outside the oasis nothing grows except rheem, the desert plant, within the oasis-bounds the gardens have become a legend.

Southern Tunisia has been little affected by contact with the modern world. Too dry for cultivation, its arid hills offered no scope for the French colonist, the nomad Arabs pass by as of old with their camels, and the Berbers cluster round the well. The cave-dwellers of Matmata still live in habitations dug out of the earth, a habit that has persisted in Africa since Palaeolithic times. If they have caught anything from the modern age, it is only that fresh well dug for them by French engineers. In Tozeur and Nefta and the Neftazoua the villagers live as in days gone by on the proceeds of their gardens of dates. The communities of the south were old in the days of Herodotus, they are older than Carthage, older than any written record of man. They have no record of their history, now they have a sight of the strength of Europe, but they will forget it again, as they have forgotten the passing of Rome. They are of the desert, unchanging, eternal.



*Black Star*

Carthage is today, and has been since the Roman town was destroyed by the Arabs in 698 A.D., a name. There is not even a village of Carthage, merely the great modern Cathedral (seen in the top picture on this page), the monastery and museum of the 'White Fathers', a missionary Order founded by Cardinal Lavigerie, a few villas, some vineyards which produce a heady wine, the chapel (1842) commemorative of St. Louis, King of France, who died there, and a few ruins. The ruins are nearly all Roman, since Carthage—the 'new City' was founded by Phoenician colonists about 822 B.C., the 'old City' was Utica, some distance north of Carthage—was utterly destroyed by the Romans in 146 B.C. after the last Punic War. The lower picture shows a Roman Viaduct.



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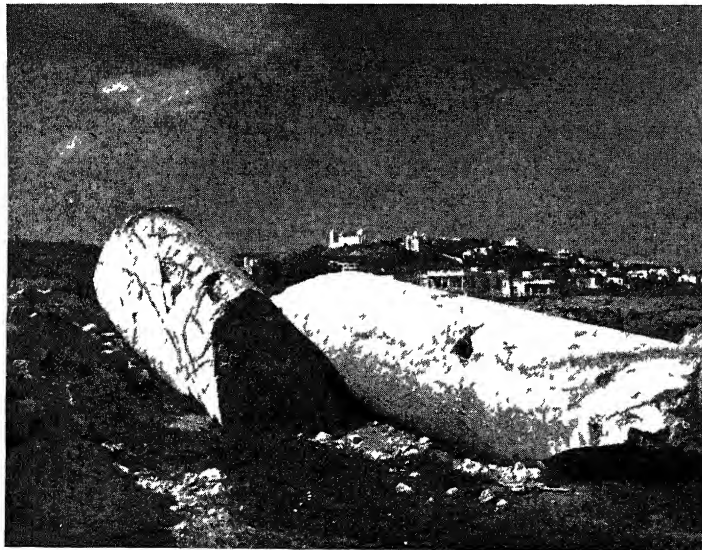


*Opposite is a view of a Roman basilica as you look south across the Bay of Tunis towards the two-horned mountain known as the Bou-Karnain, a High Place of Baal in Carthaginian times. It was consecrated to Saturn by the Romans. To the right of the picture stretches the tongue of land which divides the stagnant waters of the Bahra or lagoon of Tunis from the Bay. Here in ancient times was the harbour of the powerful city-state of Carthage. How deserted is Carthage today one can see from the grazing sheep and their diminutive shepherd sitting on a column stump with Roman mosaics at his feet.*



*Tom: Muur*

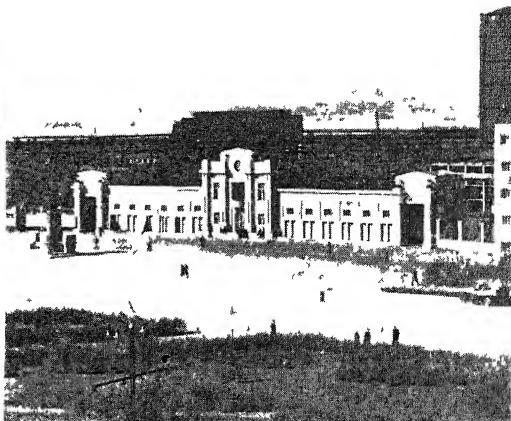
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*In the Museum of Cardinal Lavignerie's monastery are gathered the remains of Punic art found near Carthage. For so wealthy and so ancient a state the collection is not imposing, but it is curiously illustrative of the permanence of tradition. On the tombstones you see symbols still used by modern Tunisians. The Romans smashed and destroyed all that reminded them of their hated rival, yet Roman Carthage was itself for over 800 years a flourishing city. The Roman remains range from the crude provincialism of the monumental masons, seen on the left, to the massive, imposing, somewhat uninspired but very imperial 'Victory' shown opposite.*

*In the distance is the ancient Byrsa or citadel hill of Carthage, seen from the north-east.*





# Progress Beyond the Urals

by MAURICE EDELMAN

IN 1931 a long train of passenger coaches and freight cars drew up at a siding on the western slopes of the Urals. Over a discarded railway carriage, serving as a waiting-room and ticket office, was a placard with the name *Magnitostroi*. The American engineers who stepped out of the train, among them a few negroes with smart pigskin cases, looked round for porters, but in vain. They could see only wooden huts, a field of tents and large barracks in construction. With their fellow passengers, Russian, Ukrainian and Georgian engineers, they started unloading supplies from the train, which carried, in addition to precision tools, medical equipment for the *Magnitostroi* hospital and tinned foods.

The shanty town which these engineers were looking at with doubt and curiosity was, within the space of ten years, to become Magnitogorsk, a city of 400,000 people. Its furnaces, still using charcoal to smelt its iron-ore as in the 18th century when Britain was Russia's largest customer for pig-iron, were to develop through Western science and Soviet planning into one of the greatest metallurgical combines in the world.

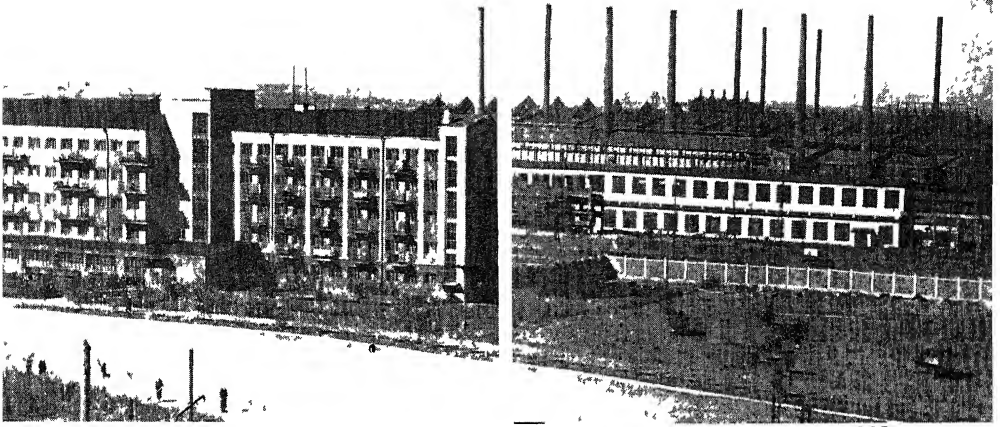
From the Urals to the Pacific, new towns sprang up in these ten years with the suddenness which marked the development of the American Middle West. Komsomolsk and Soviet Harbour in the Far East were planned

creations of the second and third Five-year Plans. Chelyabinsk, Sverdlovsk, Gorki—they all grew at the same furious pace as did Russia's industrialization. Backward towns in undeveloped Siberia became in a few years roaring factory-cities. Omsk, Tomsk, Irkutsk, old wooden towns, became cities of steel and concrete.

But to complete this transformation it was not enough to build industries in the Urals; it was necessary to supply them with workers. The population of Bashkiria and Kazakhstan, totalling over ten millions, could only be attracted from their nomadic lives to industrial settlement when they understood their place in the Soviet political system and could emerge from the separateness which their own traditions and Tsarist policy had imposed on them.

In the early years of the second Five-year Plan, the technicians had been chiefly Americans with a sprinkling of Russians. With the third Five-year Plan, the cadres of trained Russians came into their own. They led the emigration of workers from Western Russia to the east and trained native workers to become technicians, working side by side with them in friendliness and comradeship.

The inferior position of women among the Islamic peoples of Turkestan and Uzbekistan was one of the difficulties which the Soviet



*A panoramic view of the iron and steel works at Magnitogorsk, a city of 400,000 inhabitants, standing on a site that twelve years ago was undeveloped steppe*







S C R

Communist Party headquarters with the message "So much for the liquidation of illiteracy!" Despite setbacks of this kind, the benevolent intentions of the Soviet Government towards Uralian and Asiatic peoples were manifest by 1936, the year of the Stalin Constitution, when the influence of mullah and bey had been almost entirely replaced by that of Soviet government

The Stalin Constitution established the Council of Nationalities, an assembly elected from the constituent republics of the Union and parallel with the Council of Soviets, having the right to initiate and veto legislation. The Constitution confirmed the racial and national equality of the ninety million non-Russian peoples with the Russians and, as a result, all the people felt they had a stake in the Soviet fatherland—the *Rodina*. This feeling has enabled them to resist Goebbels's attempts to revive the racial antagonisms and strife which prevailed when they lived in what

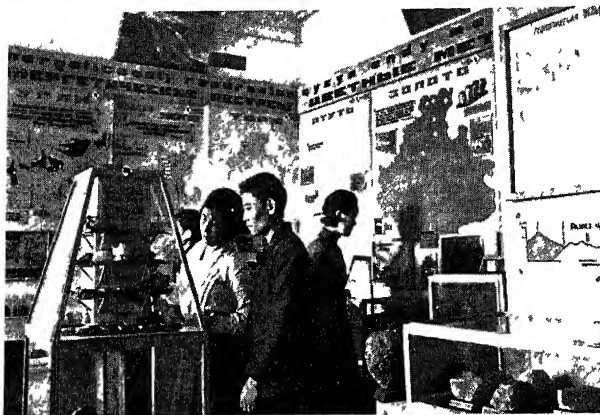
Lenin called a "prison-house of nations"

From 1936 onwards the training of native workers in Bashkiria, Kazakhstan and Central Asia was speeded up. Within two years, Molotov announced the "duplication of Western industry in the East", a process which had, in fact, been going on since the beginning of the decade. In Tashkent, Ferghana and Samarkand, narrow lanes of ill-smelling slums were dynamited and replaced by boulevards of modern factories and workers' flats. Today in almost every town of Soviet Asia, a Soviet suburb, clean and utilitarian in architecture, rises at the side of the native hovels. European dress jostles native dress. In Ashgabad, the capital of Turkmenistan, the women still wear the national dress of home-woven red silk, their breast adorned with metal pendants, coins and chains. Beneath it they wear trousers reaching to the ankles, and on their heads, elaborate tiaras, often twenty inches high,





*In Soviet Asia industrial development coincided with the campaign against illiteracy above are (left) young Kirghiz and (right) Uzbeks in school On the left scholars and students are seen in one of the museums organized to supply a regional background for historical and economic studies (Opposite) Excavating a section of the great Stalin canal at Feighana*



Government had to overcome in bringing the lives of her Asiatic citizens into line with Soviet economy, for in the U.S.S.R. women have equal rights with men and their labour is an important factor in planned production. Until as late as 1935, I saw women from the Soviet East wearing the *paranya*, a heavy, unwashed horse-hair veil concealing the face and forming a nesting-ground for flies and a breeding-place for disease. The congenitally diseased child and the blind grandfather were almost as much a part of the nomad's tent as his hearth. Asiatic women ate only after their husbands had finished, spoke only at his will and were summoned by him in the same way as his dogs. Child mortality in Soviet Asia was among the highest recorded in the world.

The campaign of *Likbes*, liquidation of illiteracy, coincided with the industrial campaign. Often at the Moscow stations I saw engineers setting out as pioneers for some

town of the Urals or Central Asia. Deputations from factories or clubs they had been associated with would come to see them off and garland them with flowers. For it was indeed a heroic enterprise to leave the comfortable institutions of the West for the barren slopes and plains of the East. But, as in the development of the British Empire, missionary and trader worked side by side, so in the Soviet East the school teacher's work was the complement of the engineer's. They left Moscow in the same trains and on arrival in Bashkiria or Turkestan or Kazakhstan, the teachers left the railway tracks and towns and travelled with their Red Yurtas among the villagers, teaching them to read and write, giving them knowledge of Soviet institutions and resisting the influence of the mullahs. These teachers often suffered the fate of evangelists. I remember the sensation in Russia in 1936 when the body of a Soviet woman teacher, hacked to pieces, was sent in a sack to the

with veils hanging down the back. The men wear dark upper garments called *khalats*, tall black or white sheepskin hats and high boots with high heels. But mingling with them you will see large-eyed, delicate-featured women of the same race, fresh from the *Parichmacherka*, their hair permanently waved, their nails manicured, wearing the bright cotton frocks and tennis shoes of the fashionable factory girl, while the men wear caps and collars and ties or *rubashkas* under European jackets, the Russian civilian development of western fashions.

The creation of the Magnitogorsk-Kusnetsk axis under the third Five-year Plan by which the iron-ore of Magnitogorsk and the coal of Kusnetsk, over a thousand miles to the east, were delivered to each other in a shuttle service, feeding the metallurgical combines at each end of the axis, stimulated the growth of new towns and the development of older ones. In the Soviet Union the town has the same attraction for the peasant as elsewhere in the world. Special technical schools were set up in Bashkiriya, Kazakhstan and the Central Asiatic Republics to train Tartars and Kazakhs for industry. They learnt rapidly. The Ford internal combustion engine was the basis of their mechanical training, and when they began to man the tractor factories of Gorki, Sverdlovsk, Chelyabinsk and Magnitogorsk it was clear that in war, as in peace, their skill

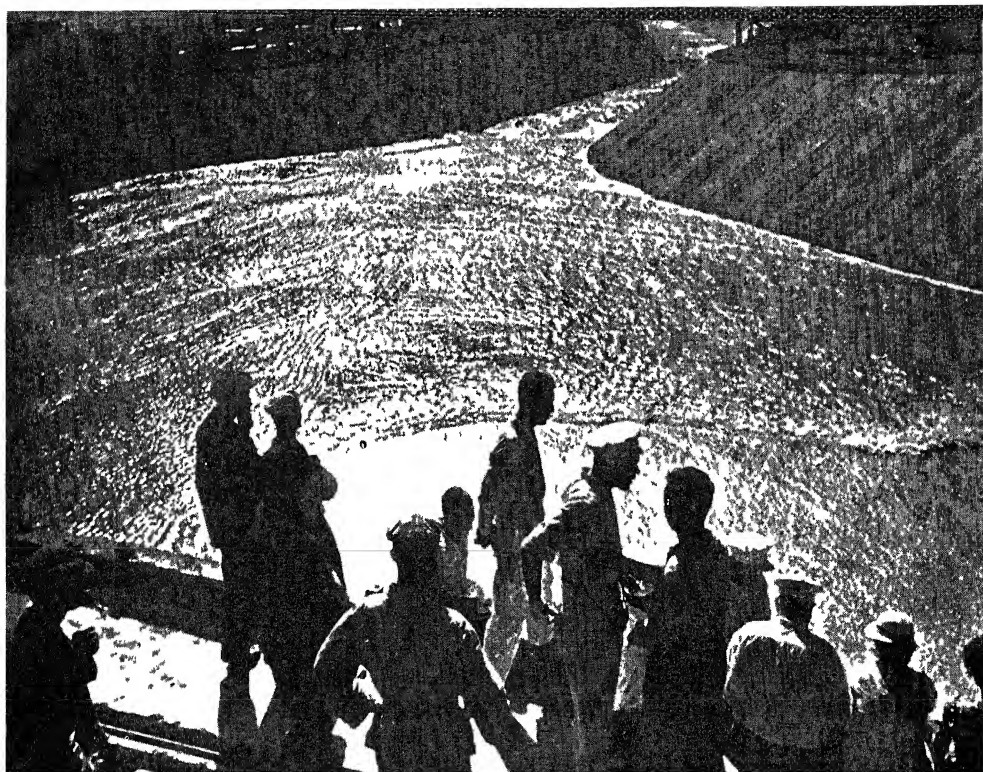
would be of great value to the Soviet Union.

It would, however, be wrong to think that the Soviet Government encouraged industrial development in the east for strategic purposes alone. The even development of Soviet economy, in the interest of all its peoples, was a cardinal point in the revolutionary programme of 1917. The cultural development of the peoples was a parallel development.

I visited the 'University of the Toiling Peoples of the East', in Moscow, in order to examine its syllabus. Principally, it trains teachers in Soviet political economy, secondarily, it encourages its Asiatic pupils to examine the cultural heritage of their own people, to record it and to foster it in their autonomous republics. Soviet rule in the east has not produced a barren uniformity. Soviet institutions such as the Parks of Culture and Rest, which you will find in the larger cities, have not superseded or smothered indigenous culture. On the contrary, story-tellers of the market-place now tell their stories and read their poems in the parks, where you can buy in print the story once known only to the story-teller himself. The children sing old half-forgotten songs which native teachers have revived and noted. The sound of native instruments fills the courtyards in the summer evenings. Their music often recalls days of servitude, but new songs

*A family of Kirghiz, originally nomads of Mongol descent, who are among "the mighty ferment of people drawn into the purposeful activity of the Soviet Union"*





Pictorial Press

*An impressive example of the development of natural resources in Soviet Asia is the great electro-chemical plant in Uzbekistan. This canal takes water to it from the Chirchick River. One of the plant's products is a nitrogen fertilizer used in the Central Asian cotton fields.*

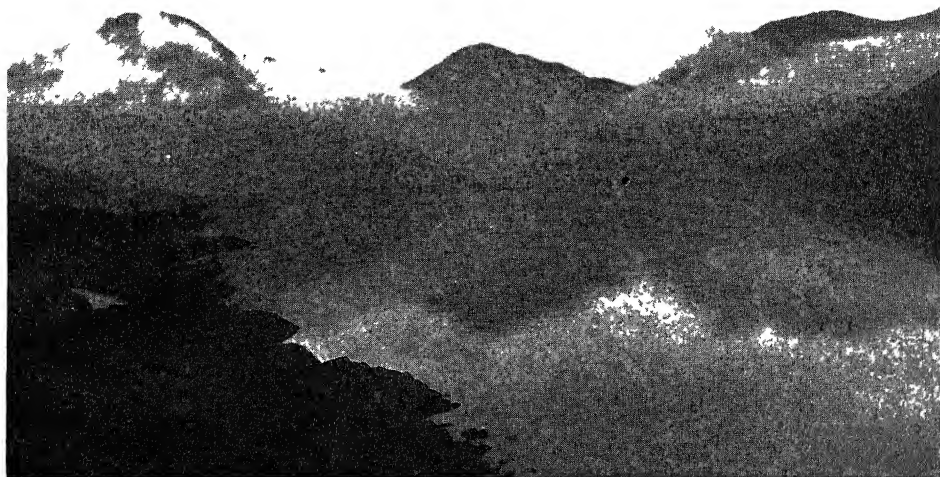
and gayer tunes are devoted to the daily work and new life of the peoples. Schools, lending libraries, reading-huts and universities where the language and literature of the national republics are fostered and taught, steadily increased before the war. Illiteracy among the young has become almost non-existent.

Today when I think of the still inviolate lands of the Soviet east, I think not merely of the tanks rolling off the mass-production lines of Chelyabinsk, or of the open hearth-furnaces of Magnitogorsk blackening the sky by day and reddening it by night, or of the carriage and wagon works—one of the greatest in the world—at Nizhni Tagil, or of the oil-cracking plant at Ufa in Bashkiria, Russia's 'Second Baku', or of the lead mines at Ridder, the chemical works of Berezniuki and the coal-fields of the Kusnetsk Basin. I think also of the mighty ferment of peoples drawn from a dozen different origins and a hundred different tribes, emerging within ten years from hard, isolated lives into a new existence

where contact with a numerically dominant people, the Russians, has not overwhelmed them but drawn them into the purposeful activity of the Soviet Union.

The first time I visited the Soviet Union I was followed through the streets by three *bezprismniki*, waifs, who whined, as though under a conductor's baton, "*Dayte mnye kopeychki*" ("Give me a few coppers"). I gave the smallest of them a few kopeks. Immediately one of the other boys said resentfully, "Don't give him any. He's a gypsy. We're Russians."

By 1936 such lingering racial prejudices had died, and Russian pioneers had shown the more backward peoples of the East that vast resources of wealth lay in their lands and labour. Accelerated by war, their joint efforts, added to the science, technical skill and man-power now being applied in the Urals and Soviet Asia, will make these regions a focal point of the world's economy when peace returns.



# Wordsworth's Lakeland

by E DE SELINCOURT, D Litt , LL D , F B A

It is not easy exactly to define the boundaries of the English Lake District, but it may roughly be regarded as comprised within a square of twenty-five miles, drawn on the map with the town of Penrith at its north-eastern corner. No poet was ever more intimately associated with his environment than was Wordsworth with this tract of country. Here was his home for all but twelve of his eighty years of life, and in only seven of those twelve did he fail to spend some portion of his time in it. In the impressionable years of boyhood, while he never travelled beyond its limits, he became familiar with its length and breadth.

Wordsworth was born on April 7, 1770, at Cockermouth, a little market town in its north-western corner, situated on the confluence of the mountain streams of Cocker and Derwent, here he had Skiddaw full in view, and was within easy reach of Loweswater and Crummock and their adjoining mountains. His grandparents lived at Penrith, and in frequent journeys thither he would pass along Bassenthwaite to Derwentwater and Keswick,

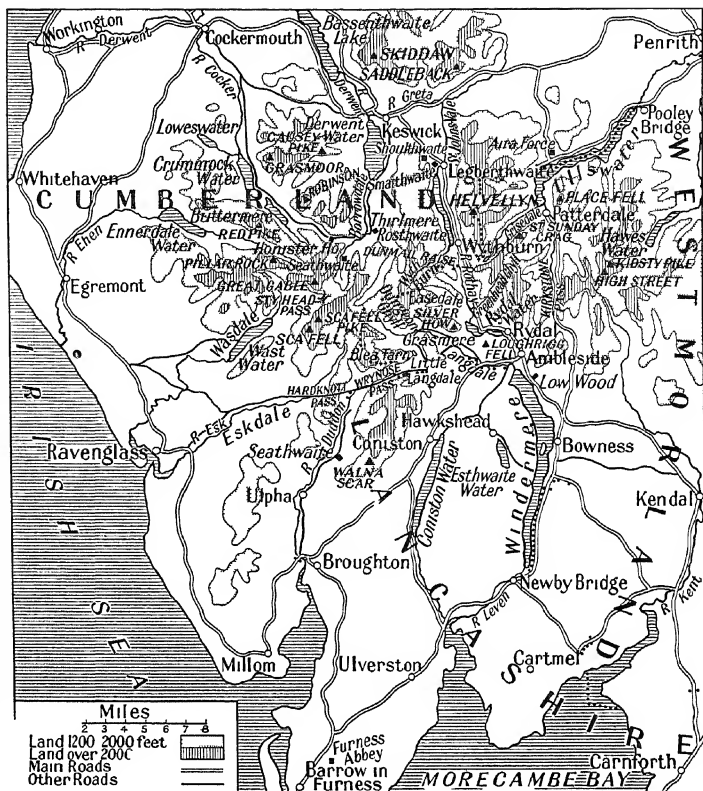
and on between Saddleback and the range of Helvellyn.

His school-days were spent at Hawkshead on Esthwaite, some twenty-five miles south-east of Cockermouth and south-west of Penrith, and the free open-air life that he enjoyed there familiarized him with most of the central and southern parts of the district. There was no official boarding-house to cramp his movements out of class hours, no organized games to encroach upon his leisure, the boys were lodged with dames in the village, who left them largely to their own devices, and the tale of his school-days tells of ranging the hills at night in search of woodcocks, of scaling the crags to rob the raven's nest, in the winter of skating by starlight, in summer of walks round Esthwaite from five o'clock in the morning, of boating excursions on Windermere and Coniston, of tramps over Walna Scar to fish in the Duddon valley, or expeditions on horseback far to the west, to Furness Abbey and the sands of Morecambe Bay. Upon one lonely ramble from Hawkshead he pierced the gap between Loughrigg Fell and Silver How, and, catching

his first glimpse of Grasmere, felt "What happy fortune were it here to live!" little dreaming that the wish was to be realized. His journey home for the holidays would take him through the very heart of the mountains, whether he went by the old Roman road that ran over the Wrynose Pass and Hardknott to the coast, or followed the route by Dunmail Raise and Thirlmere to Keswick, and when, after his father's death in 1783, his holidays were spent with his grandparents, he would have to cross the Kirkstone Pass to Patterdale, and skirt the shores of Ullswater.

When, at the age of seventeen, he left school for Cambridge, he knew his native Lakeland in all its infinite variety; his later years were to strengthen and deepen a passion thus early acquired. Of this there is evidence not only throughout his poetry, but also in his prose *Description of the Scenery of the Lakes in the North of England*. In its first form this book appeared in 1810, as the introduction to a folio of *Select Views*, indifferently drawn by a clerical acquaintance, it was later enlarged and published separately, and by 1835 had reached its fifth edition. As a guide-book, in the technical sense of the term, it has long been superseded as a sensitive and eloquent description of the distinctive features of the country it remains without a rival.

The outlines and general formation of the country could not better be indicated than by Wordsworth's comparison of it to a wheel of which the hub is composed of the central group of mountains, and the spokes of the separate valleys which radiate from it. Imagine yourself, he says, resting upon a cloud somewhere between Great Gable and Scafell Pike. To the south-east lies the valley of Langdale, leading to Windermere and so on to Morecambe Bay, due south is the vale of Conistone, running up from the sea, "not, like the other valleys, to the nave of our



wheel, but rather like a broken spoke sticking in the rim". The third spoke, still more to the west, is composed of the valley of the Duddon, "in which there is no lake but a copious stream winding among fields, rocks, and mountains, and terminating its course in the sands of Duddon". Fourth comes Eskdale, "similar in general character to the last, yet beautifully discriminated from it by peculiar features", and entering the sea just below Ravenglass. The fifth spoke is Wastdale, "with the long, narrow, stern and desolate lake of Wastwater, and, beyond this, a dusky tract of level ground conducts the eye to the Irish Sea". The sixth is Ennerdale, "with its lake of bold and somewhat savage shores", flowing into the Enna and so past Egremont to the Irish Sea. The seventh is the vale of Buttermere and Crummock, and lastly comes Borrowdale, of which the vale of Keswick is a continuation, almost due north. We have now traversed slightly more than half our circle, to complete it we must shift our position some five miles east, to the ridge of Helvellyn. From here we "look down on Wythburn and St John's Vale, which are a



*Ennerdale from Brandreth, with the Pillar,—scene of Wordsworth's tragedy The Brothers—on the left*

*1 of Doona*



*Derwentwater with Skiddaw in the background, in the foreground is one of the stone bridges so common in the district in their long rambles the poet and his sister must have passed over many such*

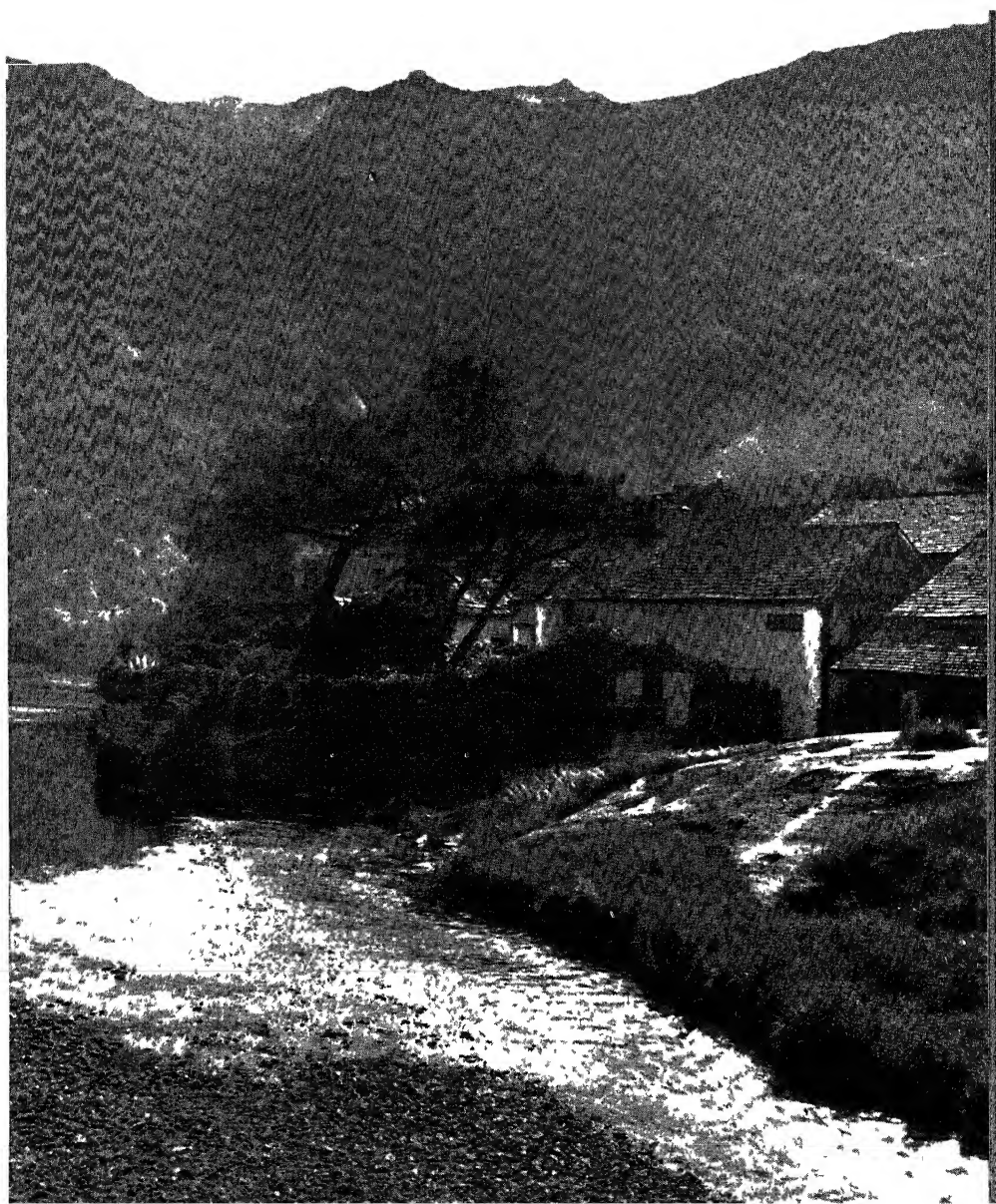
*(Opposite) Grange on the Derwent in Borrowdale The group of farm buildings is very characteristic of the region*

*British Council*

our knowledge of it, when we have any, is drawn from a note written to satisfy a friend's curiosity, or from a jotting in his sister's *Journals*. Moreover, he did not wish to tie himself down to geographical exactitude. Thus, as a note informs us, the narrative framework of *The Excursion* describes a walk up the valley of Great Langdale, and over the ridge by Blea Tarn to Little Langdale, the general features of the changing landscape, at times even identifiable spots in it, are vividly portrayed, and then, "as by the waving of a magic wand the comparatively confined valley of Langdale, its tarn, and the rude chapel which once adorned the valley" be-

come "the stately and comparatively spacious vale of Grasmere and its ancient parish Church". In the evening the party row across the lake and ascend Loughrigg, but the view upon which they look down blends features of both Grasmere and Rydal. And throughout the whole long poem local place-names only occur three times. It was Wordsworth's aim to convey the general atmosphere and spirit of the country rather than to present identifiable scenes, for he agreed with Burke that the business of poetry is "to affect by sympathy and not by imitation, and to display the effect of things on the mind and the imagination rather than to give a detailed picture of





them", in which, after all, the poet cannot compete with the painter or the photographer

But though artistic appreciation of a poem is not dependent on acquaintance with the scene that suggested it, the scene itself gains an added charm through its association with a favourite and familiar poem. It is pleasant to visit the fields beside Ullswater where the poet and his sister saw the daffodils dancing in the breeze to wander in the wood above the Wishing Gate at Grasmere which he named after his brother John to linger by the "unpretending little rill" that descends near Low-wood into Windermere, which enshrined for him "the immortal spirit of one happy day". And as Wordsworth's study was out of doors, those haunts which we know him to have frequented, "booming his verses", as his rustic neighbours reported of him, will always make a special appeal to the lover of his poetry,—Easedale, where so much of *The Prelude* was composed, White Moss Common and the upper path from Rydal to Grasmere, the former in early years and the latter in later years his almost daily resort, the road to Keswick, over which he so often tramped with his sister in quest of Coleridge, the passes of Grisedale and Kirkstone traversed again and again on visits to friends at Ullswater. Yet, after all, Wordsworth is the inspired interpreter of Lakeland as a whole, and to see any part of it with his eyes is a revelation.

But how far does Wordsworth's Lakeland survive in the Lakeland of today?

The high fells and the lonely recesses within them remain for the most part as they were, but the development of road and building has inevitably transformed the general aspect of the lower regions. Wordsworth, indeed, lived to see more than the beginning of the change. In his boyhood few of the adjacent valleys were connected by roads: bulky goods were conveyed from one vale to another on pack-horses. Each valley, however, was intersected by footpaths and cart tracks which led from farm to farm, following such devious routes as the divisions of property and the contour of the land dictated, their surface was rough and unmetalled, and the many streams that crossed them were spanned by narrow footbridges, often highly picturesque in design,—wheeled traffic had to cross by ford. As time went on these tracks were widened into country lanes, but their course was left unaltered, so that no stretches of straight road disturbed their secluded privacy. Simultaneously, the construction of turnpike roads, inaugurated by the Acts of 1763 and 1764, steadily progressed, connecting the more important towns and villages, and facilitating through traffic. These, too, as a rule, followed the old tracks, and did no violence to the land-

scape. Thus it was not till 1824 that Wordsworth had to lament the construction of a road along the edge of Grasmere, which destroyed its exquisitely indented eastern coastline.

Fortunately he did not live to see the radical transformation of the road from Grasmere to Keswick. Older inhabitants of today can still remember it as it was before Thirlmere became the Manchester Waterworks. Zig-zagging down from the top of Dunmail Raise to the little hamlet of Wythburn, it followed up and down the windings of the eastern shore of Thirlmere, then a slender river-like lake nowhere more than a quarter of a mile across, and near its centre so narrow that it was spanned by a rough, three-arched bridge, above the road towered the spurs of Helvellyn, desolate and treeless, while on the opposite bank, where was a track only suited to the pedestrian or horseman, rose in fine contrast the steep and richly wooded fells of Borrowdale. And after passing Thirlmere the road skirted Shoulthwaite Moss, home of wild birds and rare bog plants, and wound on its way by Legberthwaite and the charming bridge of Smallthwaite to Keswick. Nowadays the level of Thirlmere has been raised so that all its natural contours are lost and the promontories submerged that almost joined at the centre, while, in a season of drought and long after, an ugly bank of mud and stones, of anything from six to twelve feet, replaces its natural bank, and proclaims it a reservoir. A well-engineered road now runs on both sides, well above the level of the water, which for the most part is hidden from view by thick unsightly plantations of larch and fir. Shoulthwaite Moss has been drained out of existence, and everywhere road and bridges have been straightened and widened,—what was once the most lovely coach road in England is now a broad track on which the motorist can do his forty to fifty miles an hour without more than ordinary risk.

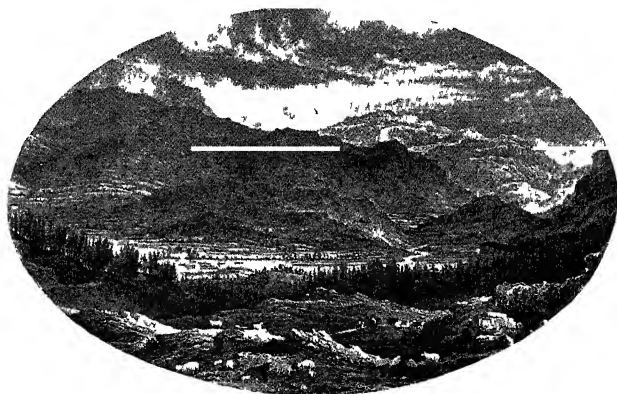
This is an extreme example of a process which endangers the whole district. Of recent years Haweswater, too, has become a waterworks, with the consequent raising of its level, the submerging of the church and inn of Mardale, and the loss of several characteristic farmsteads, while everywhere the roads are losing their quiet beauty and seclusion in order that they may be more quickly traversed. Such changes, justifiable enough in the main thoroughfares, are often perpetrated where they are wholly unnecessary and against the wishes of the majority, even of motorists. A broad motor road now climbs from the end of Borrowdale up to Honister, and one of the most remotely peaceful passes is ruined for the walker by the roar and screech of engines, a

similar disaster has long threatened the lonely Styhead Pass, which crosses from Borrowdale to Wasdale. Unless a halt is called, the change which has come over the more accessible valleys will creep into the innermost recesses of the hills.

Coincident with road development came the growth of buildings to meet the demands of the steady influx of a new type of inhabitant. In Wordsworth's youth the Lake country was wholly pastoral, save for a few large properties the vales were parcelled out into small-holdings owned by independent 'statesmen', as they were called, who lived upon the produce of their land, and found profitable employment for their families in spinning the wool from their sheep, which was duly collected, and sent on pack-horses to the neighbouring towns. But the introduction of machinery, which led to the concentration of the spinning industry in large centres of manufacture, deprived them of this source of income, many of the humbler statesmen now found it impossible to earn a livelihood, and their land came into the market, to be bought up by new settlers who were attracted to the country by the amenities it offered for holiday resort or permanent retirement. The poet Gray, passing through Grasmere in 1762, wrote that "no flaring gentleman's house or garden wall breaks in upon the repose of this little unsuspected paradise, but all is peace, rusticity, and happy poverty in its simplest and most becoming attire", and Wordsworth bears witness that in the early years of the 19th century this was equally true of Grasmere's sister vales. But it was not to last. As early as 1805 Wordsworth recorded how a Liverpool lawyer had erected at the head of the Lake "a temple of abomination, which will stare you in the face from every part of the vale, and entirely

destroy its character of simplicity and seclusion". There is some irony in the fact that the poet was himself its first tenant. And Grasmere suffered less than many of the other villages. Throughout the countryside, and especially on the high-roads and near the lakes, comely old farm buildings were superseded by residences erected for the newly arrived gentry, often pretentious in style, or disfigured by injudicious planting and general lay-out. Thus Landor, visiting the lakes in 1820, gave up Windermere as already past praying for, and groaned over recent violations of Derwentwater. And the little towns, enlarged and largely rebuilt to cater for the new resident population and the ever-increasing flow of tourists, gradually lost their old-world charm. Early 19th-century prints of Ambleside depict a highly picturesque little township, in full harmony with the countryside which it served, today it is a blot on its environment, of the better known Lakeland towns Hawkshead alone retains something of the character it bore a century ago.

But though much of the beauty that inspired the poetry of Wordsworth is thus irrecoverably lost, much still remains, and as life on this island becomes ever more mechanized, more crowded and more noisy, the call for its protection becomes ever more insistent. This cannot be left to chance, only by scheduling large portions, at least, of the area as a national park, and by a wise and really effective control both over building and over the utilization of land, can it be saved from the rash assault of thoughtless and selfish exploitation. Our countryside is among the most precious heirlooms in our national heritage, and of our many projects for a better and happier future, there can, surely, be few more urgent than its preservation.



*Eskdale*

# Sea Power and National Fortunes

## V. From the Peace of Versailles to the Present Day

by ADMIRAL SIR HERBERT RICHMOND, K C B

*In this final article of our series—begun with J A Williamson's contribution on Some Historical Factors (July 1942) and The 16th and 17th Centuries (September 1942), continued by Edward Powley, on the period From 1688 to 1816 (November 1942), and Admiral Sir Herbert Richmond, who surveyed the age of British world naval ascendancy From the Napoleonic Wars to 1918 (December 1942)—the meaning for Britain of the changes both in technical instruments and world-power which have taken place during the last quarter of a century is analysed by Sir Herbert Richmond, who gives his reasons for thinking that command of the seas, in its most modern interpretation, must still be the basis of British policy*

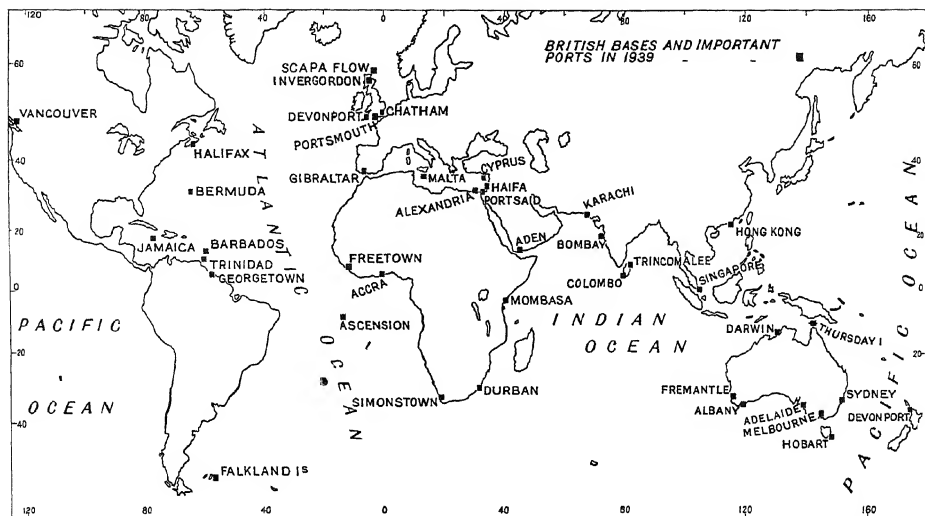
IN the wave of a widespread belief that war had been banished from the world after the defeat of the German aggression of 1914-18, and that the moral influence of the League of Nations would suffice to restrain a future would-be aggressor, Britain's need of sea power, and the part which sea power had played in the four-year struggle, as well as in the past, were forgotten. Sea power came to be measured in terms of battleships and their size. Its other constituents were ignored.

Sea power is not the possession of a number of large ships. Its true meaning is not concrete. Sea power is, as has been said earlier in these pages, that capacity which enables its possessor to control movements across seas that separate combatant nations from the territories they, or one of them, desire to conquer, or from the sources of supplies not obtainable within their own or their territorial neighbours' boundaries.

The power to exercise this control depends upon the possession of fighting craft of every type able to take part in operations which lead to the establishment of control in the words of President Roosevelt, "Ships that sail on the surface of the ocean, ships that move under the surface, and ships that move through the air." Control results from the defeat of those fighting forces of the enemy which dispute command of the seas, and consists in the regulation of transport, of troops or trade, across the intervening waters. The fighting forces on, under and above the surface of the water cannot operate without bases,

and therefore bases are an essential element in sea power. Finally, control is only partially successful if confined to preventing the enemy from crossing the sea, though that is both offensive and defensive in character. It must also enable the sea to be used as a road for traffic, and traffic can only be conducted if there are vehicles in which to conduct it. At present those vehicles are, in the main, ships—the time will probably come when traffic on a far larger scale will pass by way of the air, but it has not come yet. Ships must therefore exist, and shipbuilding is thus a third essential element in sea power.

Though lip-service was paid in plenty to the Royal and Merchant navies for their part in the war of 1914-18, after the peace the sea power of Britain was deliberately sacrificed. Disarmament was hurriedly undertaken, irrespective of what other nations were doing or of the unrest that still existed in Europe. Britain was assigned the part of leading the way in dissipating sea armaments. Others, it was imagined, would follow that lead. The sacrifices affected each of the three elements of sea power. In the material sphere of fighting ships, the Washington Treaty introduced definitions which had no relation to actualities of either strategy or tactics. It laid down arbitrary dimensions for the different types of ships, equally without relation to the arts of war. Its terms prevented Britain from providing herself with ships capable of meeting, upon terms of equal strength and with adequate numbers, the



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later German heavy armoured cruisers, called 'pocket battleships', in the way she earlier had met similar threats by armoured cruisers built by Russia and France for the purpose of the *guerre-de-course*

In the later Treaty of London even more egregious errors were made in cruiser and destroyer strength. It had long been an axiom of British naval policy that in this country the number of cruisers is determined by the duties they have to perform and the dispositions those duties entail not by the number of the enemy's cruisers. For example Lord Exmouth, advising on the cruiser force needed in the Indian seas in 1810, had categorically said that "the calculation must not be founded on the numbers of the enemy. The immense trade [is] so scattered and divided as to require a very large force to furnish it with adequate security". He based his calculation on the convoy and cruising requirements

In a precisely similar way Admiral Hornby, in 1888, worked out our needs on the basis of the cruising stations and convoy services, not upon the number of our then prospective enemies. His calculations called for 186 vessels

In 1914 our cruisers numbered over 120, and though sixty armed auxiliary ships were commissioned we had to build more cruisers during the war in order to meet our needs. Even as recently as 1921 the Cabinet, recognizing the same principle, had refused to discuss a proposal to impose a limitation based on the numbers of another Power, stating with the utmost clearness that our needs were

absolute and not relative. But all this experience was rejected, all these opinions were dismissed as worthless. The principle was reversed. The cruiser strength was "founded on the numbers" of another Power, and the number was reduced to 50—less than half, even without the armed vessels, of what we had so recently needed to preserve our communications

A no less false assumption informed the reductions imposed upon the flotilla vessels whose number, it was asserted, was regulated by the number of potential enemy submarines—a delusion that would have been gross even if the whole duty of the destroyer lay in protecting trade against the submarine, but was the more gross in that it totally ignored all the other duties which that naval 'maid of all work' had to perform in the late war

In the matter of aircraft there was an equal want of foresight. The war had seen the first use of them in sea war, and a very large number had been employed, yet it was not realized in this country that aircraft had become integral units of a navy, as it was in Japan and the United States. So the navy was deprived of its aircraft

While these grave mistakes were made in fighting material, sea power was also weakened in its second element—Bases. Evidence of their importance and of the part they had recently played was not wanting. Those responsible for the Treaty of Versailles had shown that they realized it in relation to the German bases in Africa, and the dependence of flotillas on Irish ports was fresh in the

memory of everyone at the time of the first Irish Treaty the Admiralty had said that "it would be very difficult, perhaps almost impossible to feed the island in time of war without them" Yet these bases were abandoned, and an attempt was even made to stop the construction of a base at Singapore. The aerial defences of Malta and Gibraltar were entirely neglected.

Finally, in the third element, shipping, the merchant navy was suffered to meet the full blast of competition with heavily subsidized foreign merchant fleets. It dwindled to a bare half of its previous tonnage, with serious effect upon its capacity both to carry the goods and armies that must cross the sea in war, and to stand the losses which, even in the most effective conditions of defence, it is bound to suffer. Shipyards were shut down and skilled men drifted into other employments or emigrated.

To complete the picture, Germany was permitted to abrogate the treaty which had limited her navy and forbidden her to build large battleships, heavy cruisers and submarines. This permission was accorded without consultation with our co-signatory, France, who was confronted with a Germany placed upon an equality with her at sea. The result was a wave of French indignation, particularly among naval officers, which has not been without its effect upon the relations between Britain and France during the present war.

When war broke out in September 1939, while British sea power had been gravely compromised, Germany's had been in a constant state of reconstruction and growth. She already possessed some heavy ships and about three score submarines, and her shipyards were busy with many more and with the fitting out of armed merchantment for attack on commerce. That attack was to be threefold. Submarines were to intercept trade in the approaches to the kingdom, throwing to the winds those restrictions on methods to which Germany herself had subscribed. They were to be sent out in advance so as to be in position at zero hour. Heavy armoured cruisers were to go out on the trade routes. The German naval strategists had taken note of the weakened cruiser forces of Britain and of the types of 'light' unarmoured ships to which they were confined, and had built armoured vessels mounting eleven-inch guns—none of the British could carry larger than eight-inch, and of these there were few. It was calculated that one such armoured ship would be a match for as many as three, or even four, of the British types, and that the

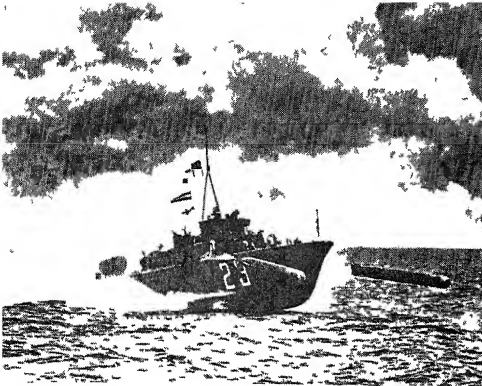
limited number of these would make it impossible to give adequate protection to every one of the many convoys that the needs of the country would call for. The calculation that even a few of these heavy ships would cripple trade was justified on 'ballistic' grounds. Thus the secondary armament alone of the *Graf Spee* was equal to the whole armament of one of the lesser cruisers that fought her off the Plate River, and her whole broadside weighed 4700 lb against 3136 of the three British ships.

Besides providing the regular ships of the navy, great care was taken in arming and fitting out German merchant ships as raiders. These were ships of moderate size—not more than 10,000 tons—fast, provisioned and fuelled for long periods, armed with several 5.9-inch guns and torpedoes, aircraft for scouting, and mines, and capable of being altered in appearance by false upper works, boats, masts and funnels and frequent repainting. They carried crews of over 300, and were to be met in remote and uninhabited spots, such as islands or anchorages in the Indian Ocean or South America, by supply ships.

The third weapon was the mine. An extensive mining campaign was to be conducted. A magnetic mine—itsself a British invention—with highly ingenious mechanism, had been made which could be laid from aircraft in the estuaries and shoal waters round the kingdom. It lay on the bottom and thus, having no moorings, could not be destroyed by the ordinary processes of sweeping. It was confidently expected that there was no way by which it could be dealt with. It was brought into use in the latter part of 1939 and caused a heavy loss of ships before an answer to it was found. It was supplemented by an acoustic mine, exploded by the noise of a ship's engines when passing over it. To that too an answer had to be, and was, found, though it took time and many ships were sunk.

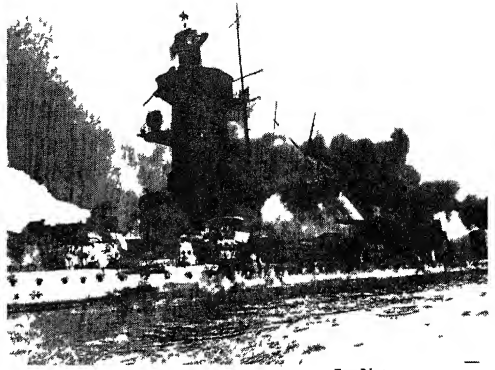
The combination of convoy in home waters, of cruising in the outer seas, of mine-sweeping, observation and devices against the mines, kept the shipping losses within reasonable bounds during the first nine months of the war while the flotillas were still little reduced by loss and the assistance of the French fleet continued. A bad turn then came, beginning with the invasion of Norway. That invasion, of which the primary object was to obtain naval bases outside the Heligoland Bight, had been meticulously prepared by the enemy in every respect, from internal corruption, attack without warning or quarrel, the use of the 'Trojan horse' and the employment of all the new weapons of sea warfare in combination,





Central Press

(Above) One of the British motor torpedo boats used to attack the coastal communications which supply enemy forces in the Low Countries and France (Right) Scuttling of the heavy armoured ship Graf Spee in the River Plate after action with three British unarmoured cruisers



Fox Photos

including the transport of troops by air

The allied defeats on the Continent gave Germany naval bases from Narvik to the Pyrenees which enabled her to intensify her attack on shipping. Aircraft could then act all over the North Sea and into the Atlantic, in addition to submarines which had until then acted alone, and small motor boats of high speed—again a British invention of the last war—could take part in attacking the coastal trade. The possession of ports along the French coast assisted the movements of supply ships for the larger cruisers which now operated from Brest.

At the same time as France threw in her hand, Italy joined the enemy. The position in the Mediterranean had rested on the strength of the Allied navies. Britain now found herself in marked inferiority, in all classes of ships, to Italy who, in addition to her six battleships and several cruisers, had a numerous flotilla of surface ships and submarines and the whole of her air forces. Detachments had to be made from a flotilla already greatly weakened by losses in the Norway and Dunkirk evacuations to the Mediterranean.

British shipping losses went up by bounds. Fortunately the Italian army and navy suffered from an extreme diffidence and refrained from making use of their undisputed superiority on land, at sea and in the air to invade Egypt or attempt to come to action with the British fleet. At the same time the British had cause to be thankful for that measure of foresight and understanding of the

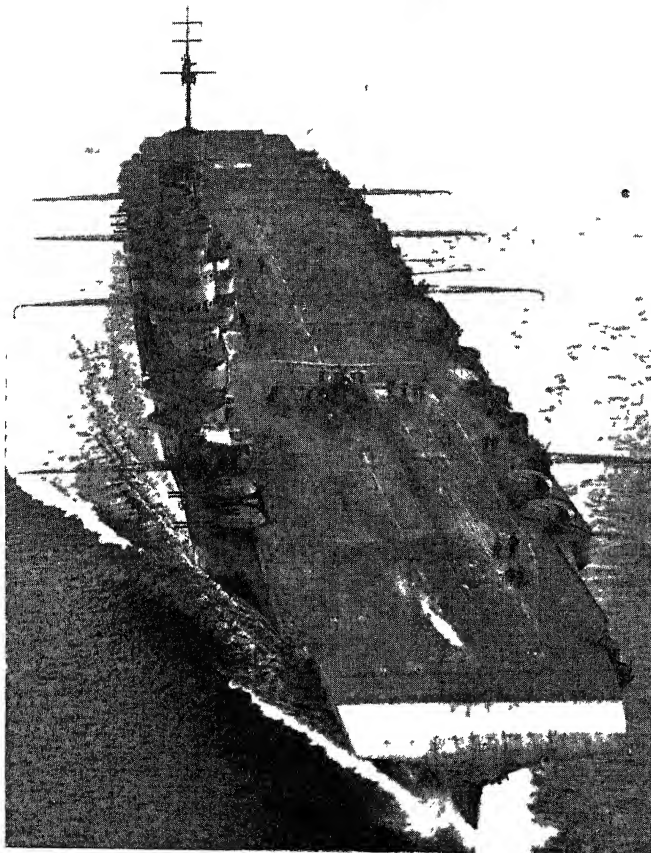


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German mind through which Germany was deprived of those colonies in Africa in which she had intended to create naval bases on the Atlantic and Indian Ocean.

The expulsion of the Italians from East Africa, depriving Italy of bases in the Red Sea and on the coast of Africa, was a valuable stroke in the defence of trade. But Germany's eyes were never deflected from Dakar and Casablanca and it was a catastrophe of the first order, which cost us many ships, that the expedition against that port was so indifferently planned. With Dakar, German naval and air forces were able to exercise severe pressure in the comparatively narrow waist of 2000 miles of sea between it and the opposite salient of South America.

The German attack on Russia in June 1941 threw fresh demands on British sea power. Russia, for all her development of industry,



*The aircraft carrier Illustrious, which was severely damaged while escorting a convoy to Malta but is now back in service*

Central Press

Russia, forced by navigation conditions to take a route within striking range of the Norwegian bases. Our bases lay much further off, making it impossible for us to accompany our convoys with the appropriate forms of defence—fighter aircraft in greater numbers and motor gunboats. Four strongly defended German bases have been created—Narvik, Tromsø, Bergen and Trondheim.

By the disablement of the American Pacific fleet at Pearl Harbour, made under cover of a pretence that negotiations were sincerely in progress and without a declaration of war, Japan obtained temporary command of the Pacific Ocean and the Indian sea. The British possessions, whose security depended wholly upon sea power, were at once deprived of their shield and quickly overrun. So too were the Dutch islands, which in turn depended on the British navy for defence against their powerful neighbour and served, as the Low Countries in Europe served Great Britain, as a buffer between that aggressor nation and the British Dominions in Australasia. In enemy hands they are stepping-stones, set close together, for the advance of military and air forces to the north of Australia. The impossibility of defending a

two-hemisphere empire with a less than one-hemisphere navy was pointed out by Lord Jellicoe when he made his world cruise after the last war. His warning, and his proposals, had been disregarded, with the results that Malaya, Borneo and Burma fell into the enemy's hands, Singapore was lost, India and Australia exposed to invasion, and the trade of the eastern seas suffered grave losses.

needed munitions most urgently, she had lost, in the first spate of the German onrush, many of her manufacturing resources. Munitions could reach her by sea only, either by way of the Cape and the Persian Gulf or north about Murmansk. The significance of the Norwegian invasion was doubled, for the short-ranged forces of aircraft and motor boats as well as the heavy and light ships could reach and attack the convoys on their way to

Ceylon, with its minor but very important base, Trincomali, was attacked but the timely arrival of a force of Hudsons drove off the attackers. Further south, two positions are important—the islands of Mauritius and Madagascar. Mauritius is fortified and Madagascar has been occupied, but the holding of both depends on our retention of the command of the sea. If this had passed from us before our expedition arrived, the route along the east coast of Africa by which the British armies in Egypt and Persia and, in part, the Russian armies, were supplied, those forces would have been in the gravest danger.

While it was the loss of sea power that brought about this series of disasters, unequalled in our history, the threat of still further losses was averted by sea power. Two Japanese expeditions, one directed against Australia and one against the American bases at Midway Island and, probably, Honolulu, were intercepted by the American fleet and broken up. Later, an American expedition landed in the Solomon Islands, which, in the hands of the enemy, would constitute a serious threat to Australia, flanking as they do on the line of communications with America.

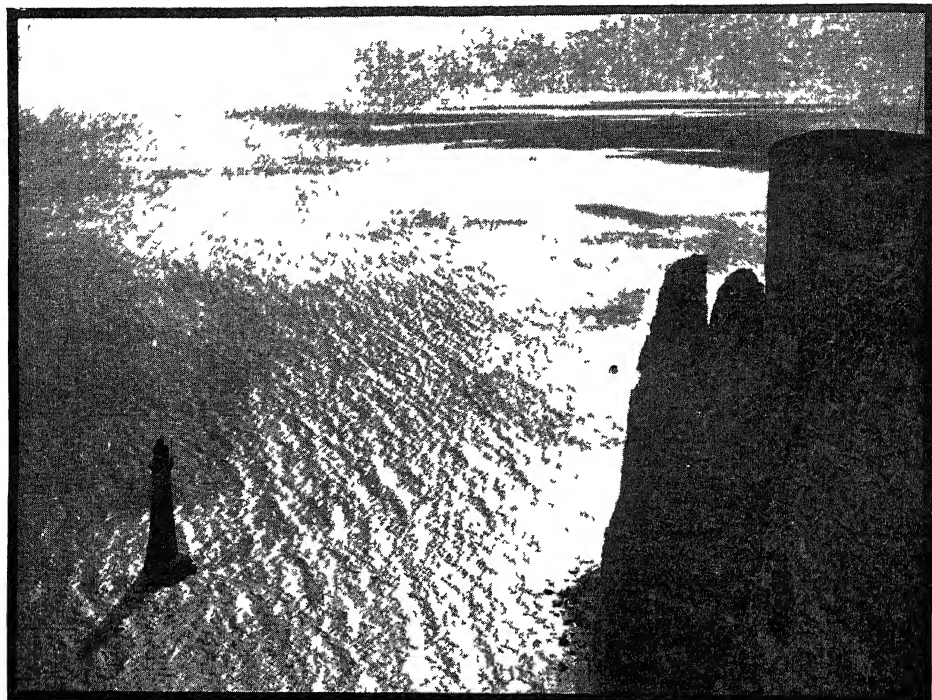
Like the campaigns in the North Sea and Atlantic, that in the Eastern seas illustrates the threefold nature of sea power. The means by which the Japanese have attained their successes, apart from the initial treachery, is sea power, consisting of a combination of fighting ships and vessels of every type, including those in the air, bases, and a merchant navy numerous and fast which has been studiously fostered by an elaborate system of subsidies. The task of ejecting the Japanese from their conquests will be a difficult one in the face of the heavily fortified chain of bases from which shore-based aircraft can work, and in the absence of any allied bases until recapture shall have placed them in our hands.

While the influence of positions on sea power is thus so abundantly illustrated, so too is the interdependence of all the theatres of the war at sea illustrated by the effects of the German submarine campaign on the naval situation as a whole. The increasingly effective defence of shipping in the Western Approaches, where sea and air units of the British command operate under a single direction, had thrust the attackers further away from the vital area to the west of Ireland. With the entry of the United States into the war large numbers of the U-boats were sent to the American coast to interrupt

the highly important coastal services of shipping by whose means the whole distribution of goods is effected. Losses have been suffered by the United States for want of a sufficient number of light craft to provide an effective convoy service.

While the direct defence of the sea communications rests with sea power it has always been supplemented by action of another kind. One of the many activities of the British army in the wars of the past was that of capturing the naval bases of the enemy and destroying the ships in them. The attacks on the German colonies in the last war originated in that intention, and we have seen the laments of the German admirals that their cruiser warfare was crippled by the absence of overseas bases, and their proposals to re-establish these bases in Africa. In the present war an attempt is being made to apply the new instrument of the air to this object by bombarding the commerce attackers in their bases and disabling the building facilities in the German yards. The submarine bases and ports in France have been the targets of the Coastal Command, and the building yards at Wilhelmshaven, Hamburg, Emden, Bremen, Danzig, Lubeck and Rostock of Bomber Command. The bombing of ports and submarine bases can, however, only partially solve the problem, for there remains a large number of enemy craft at sea whose destruction is necessary and this cannot be achieved by the 'long term' policy of bombing: nor does the bombing affect the German surface forces of light craft or their aircraft which, as we know, contribute a respectable proportion to the losses, or the navies of Italy and Japan. Nothing but the most strenuous efforts at sea of all types of fighting instruments capable of taking part in the operations of sea warfare can effectively reduce our losses and destroy the naval forces of the enemy.

Writing over half a century ago at a time when our sea power was being gravely neglected, Admiral Colomb said, "Keep the command of the sea as you value the national life. Without it you will speedily be blotted out from the list of great nations." That advice has been neglected, and the results of that neglect are plain. The first object of our strategy and production must now be the recovery of our command of the sea, and we should bend all the efforts of our combined fighting forces primarily to that task. It is a hard task, beyond doubt, but victory depends upon its successful performance.



*British Council*

# Lighthouse Life

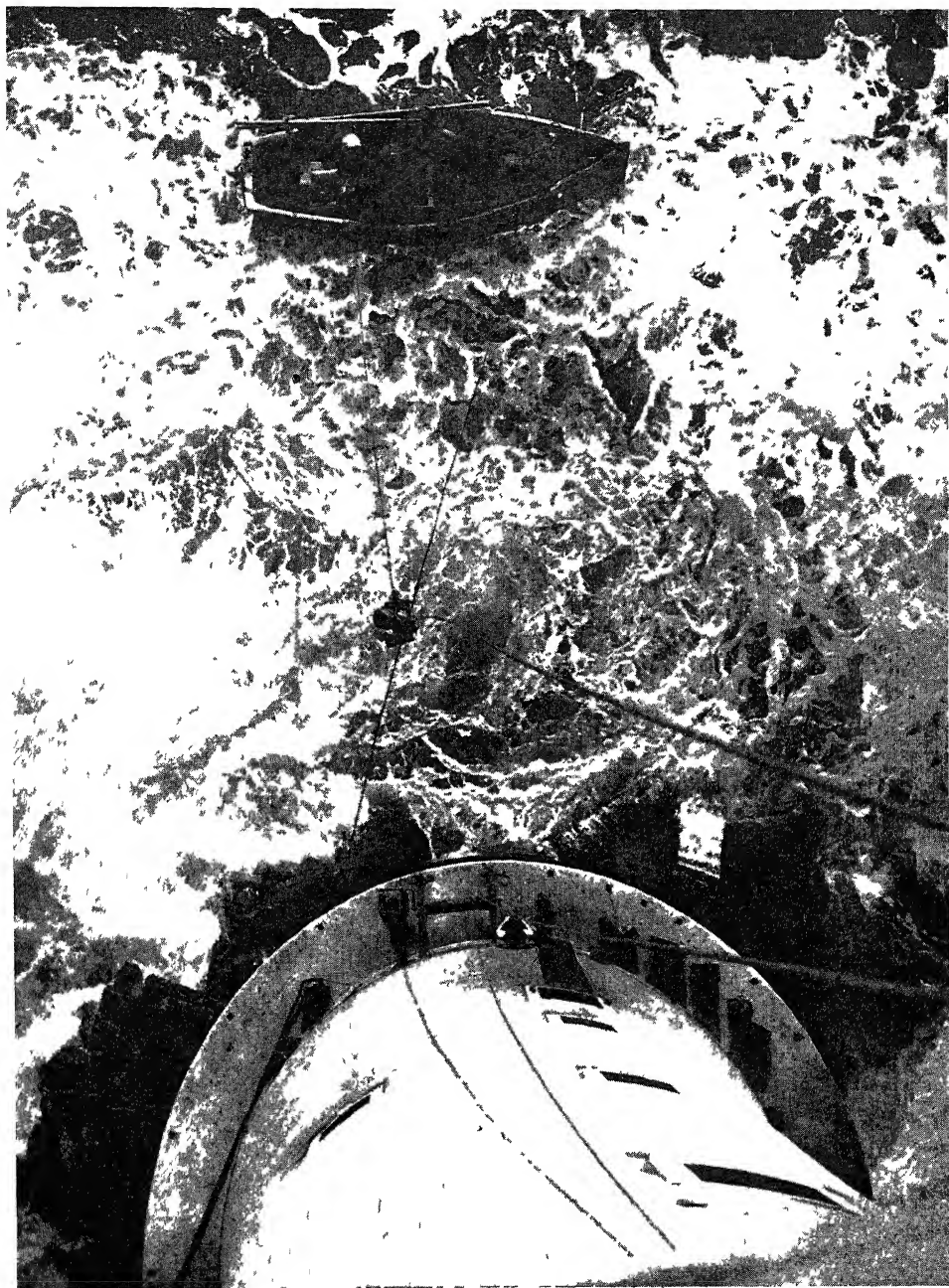
by J P BOWEN

LIGHTHOUSES, fog signals and wireless aids to navigation can now be found on main shipping routes throughout the world, and, though they may differ in detail and design, their principles and object have a common significance. A description of a few of the lighthouses maintained by the Corporation of Trinity House on passage up the English Channel to the Port of London will suffice to give a representative view.

Coming in from the Atlantic the first land-fall is the Scilly Isles, about twenty-five miles from the Cornish seaboard, and the first land-fall light is shown from the Bishop Rock tower, standing on the southernmost exposed rock, a sharp pinnacle jutting up from the sea. This lighthouse is built of grey granite, with all the stones interlocked, and rises to 167 feet above sea level. It has a solid cylindrical base of nearly 41 feet diameter reaching to 23 feet above high water, its object being to present a vertical face to the waves and break

up the direct impact of the heaviest Atlantic swell. At the top of this base is a set-off which acts as a landing platform and provides a walk-way for the keepers in calm weather, above it the tower rises with a graceful curve, the first 24 feet of the shaft being solid and the walls thence of varying thickness, reducing from 8 feet at the bottom to  $2\frac{1}{2}$  feet at the top, to increase the size of the rooms within as much as is consistent with the stabilizing weight required to withstand the shock of the sea.

There are eight rooms in the tower, superimposed one above the other, but only three of them can be reserved for living accommodation. The remainder have to be allotted to the operational requirements of the lighthouse and its fog signal, which is an explosive charge fired electrically at regular intervals. Except in the calmest of weather it is not possible to step ashore on the rock, to land at the lighthouse the relief boat has to be

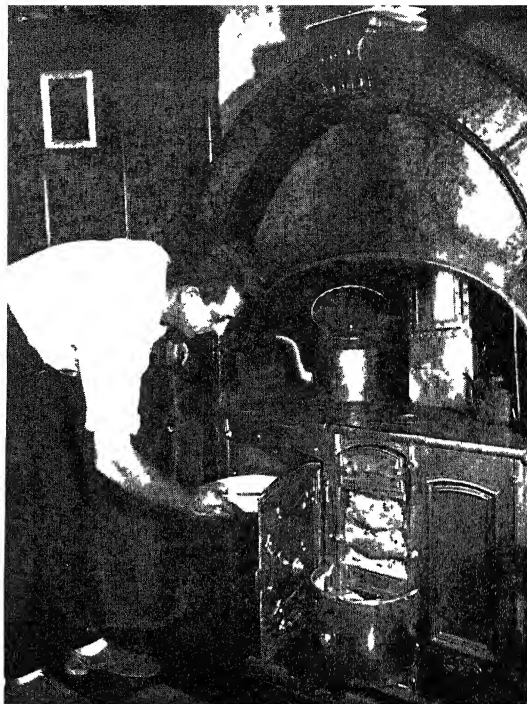


*Fox Photos*

*The Bishop Rock Lighthouse relief-boat moored in an angry swell alongside the tower while the newly landed duty keeper helps his mate to hoist stores and provisions ashore*



*Fox Photos*



*Picture Post*

pumping water for cooking and washing and carrying oil for lamps up the tower from the storage tanks below, making and baking bread as well as daily cooking and the usual routine of domestic life. In most lighthouses nowadays the keepers have wireless receiving sets so that they can listen-in to broadcast programmes, but otherwise their recreation is limited to an occasional letter home (to be posted when the relief boat calls), reading, making models and such fishing as is possible from an exposed rock tower like the Bishop Rock. Generally it is too dangerous during most days of the year to fish from the offset, and the method employed is a kite which flies the line off from the tower. Many a fish up to 10 lb in weight has been caught from this tower.

Proceeding towards the mainland we pass an outpost lighthouse at the Wolf Rock, so called because of the cavernous bark caused by trapped air escaping from a submarine cave below during a wild sea. This tower is smaller than the Bishop Rock with consequently less accommodation, it has a landing platform but no vertical base to break up the waves, and in stormy weather green seas and spray run right up the tower and almost entirely hide it from view. Because of the heavy ground-swell which runs around this



(Top left) A marooned keeper homeward bound after being four weeks overdue. (Top right) The domestic and almost homely side of lighthouse life. (Above) A keeper putting his leisure hours to useful purpose. (Opposite) Kindling the light for the night watch. The apparatus shown here is of an old type.



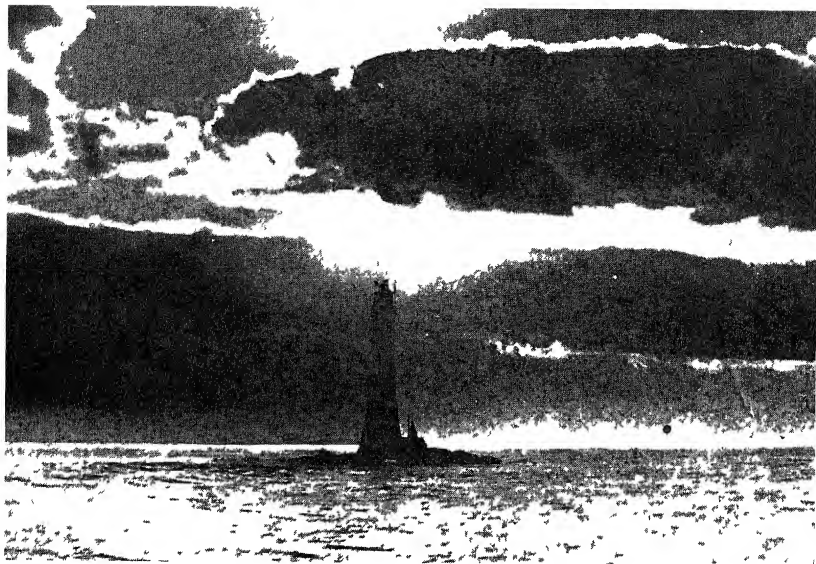


*Picture Post*

rock, landing can only be effected by crane hoist as at the Bishop Rock, and because of its remoteness from shore the keepers' two-months stay is frequently exceeded during the winter, as the reliefs are often overdue through stress of weather, they have, however, their full month ashore afterwards as compensation

The mainland landfall is at Lizard, whence we pass on up channel to that epic of towers, the stately Eddystone, built by Sir James Douglass and completed in 1882. It is the fourth to be erected to mark this famous rock. So much has already been written about it that comment here is unnecessary.

From Eddystone our journey takes us past



*The Wolf Rock Lighthouse, serene in its isolation before the storm (Opposite, left) The lighthouse tender leaving the Eddystone after completing the relief (Right) St Catherine's, Isle of Wight*

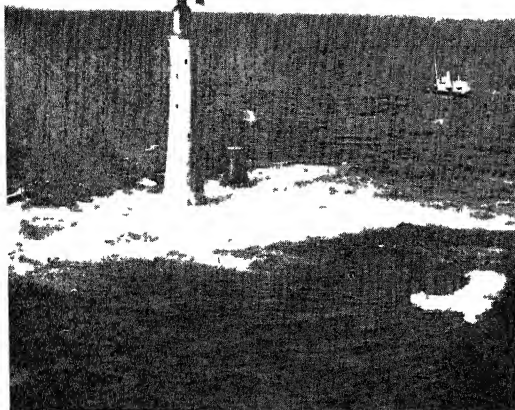
FOX PHOTOS

Start Point to St Catherine's, the southernmost point of the Isle of Wight, where stands a tower of historic interest. Two earlier lighthouses—one completed, the other unfinished and both now in ruins—can be found further inland at Blackgang on the high ground of Niton Downs. The former dates back to the 14th century, and legend has it that on a stormy night in the winter of 1314 a vessel conveying white wine, belonging to the religious community of Livers, from Picardy to England drove ashore on the Atherfield Ledge to the westward. The sailors who escaped illicitly sold their cargo, of which part was bought by an Island landowner, Walter de Godeton. As a punishment for receiving stolen goods, he was required "to build on the Downs above the scene of the disaster a lighthouse to warn ships and to found an oratory for a priest to say Masses for the souls of those lost at sea and trim the light." This lighthouse fell into disuse during the Reformation, but in 1785 the Trinity House decided to build a new one alongside but a little nearer the coast than the older one. The Downs hereabouts are frequently mist-capped and, though the tower was partly built, the project was later abandoned, probably for this reason.

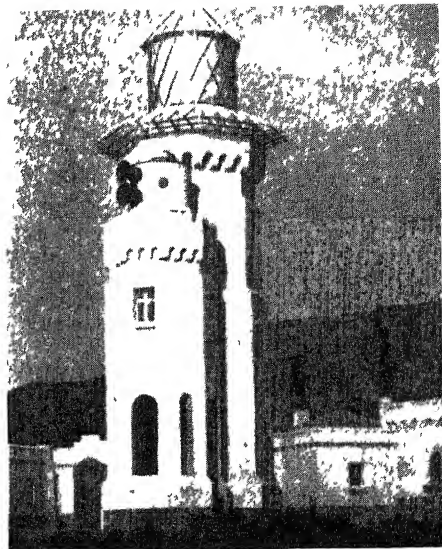
The present St Catherine's Lighthouse, erected on the Point itself at a much lower elevation, was built in 1838. It too, even in this new position, was found on occasion to be mist-capped, and in 1875 the tower, formerly 94 feet from floor to gallery, was shortened to 52½ feet and the head re-set. A powerful

electric light was installed in 1888, and in 1931 the lighthouse was further improved and an annexe built onto the existing tower to house a modern siren fog signal. The beams of this light are of several million candlepower and have a clear-weather range of about twenty miles from a ship with a 45-foot bridge, but their loom can sometimes be seen in the Channel Islands some seventy miles distant when the weather is very clear and the sky rare, though this is usually a portent of bad weather. On shore there are several attractions for its occupants, including a neighbouring village, a regular postal service and fresh milk and food. The station is manned by three resident keepers each of whom has his own private dwelling where he can live with his family. As on the rock towers, there are the regular service duties to attend to and day and night watches to be kept, but the keepers are free of domestic cares. On the other side of the balance they have to function each day all the year round and do not have periodical relief except during their spell of annual leave.

Beyond St Catherine's the next point of interest is Dungeness where a vast shingle bank, stretching some miles inland, has been gradually thrown up by the sea and continues to extend seaward at the Ness at the rate of about 5 feet a year. There are two towers at the Point, one a high tower about 600 yards inshore carrying the making light, essentially lofty because of the low-lying nature of the beach, the other a low tower with a minor light marking the Point itself, as the bank



*Fox Photo's*



*Trinity House*

shelves steeply and ships frequently pass close inshore. Alongside the low light is also the fog signal-house with its powerful horn placed as near as possible to the danger. In addition there is a radio beacon giving a wireless directional service at the main tower. If the shingle beach is viewed from the gallery of the high tower it can be seen presenting an undulating surface stretching for some distance inshore, indicating a gradual building-up of the bank by wave action with the crests suggesting periods of continuous gales.

From Dungeness we pass on through the Straits of Dover with its white chalk cliffs past the South Foreland to the East Coast and its sandbanks, beginning with the treacherous Goodwin Sands where in bygone days many ships and cargoes have been swallowed up. These banks are marked by a series of light-vessels of which a modern example can be seen at the Longue. From a lantern on a central trestle tower is shown a powerful electric light, and for the fog warning there is a fog-horn with a range of seven miles. The ship is also fitted with a wireless telephone so that the master can keep in constant communication with the shore for life-saving purposes. The crew of the light-vessel consists of a master and six ratings always on board, and a master and three ratings in reserve ashore, the masters are relieved every fortnight and the remainder of the crew every month all thus have fourteen days ashore between their turns of duty.

Life on a lightship has more romance than on a rock lighthouse, for, unlike the lighthouse

keepers who tend their light and live their lives in a rock fastness, lightsmen know and experience the perils of the deep and battle with the furies of the elements. They have more room for exercise and probably more to occupy their minds; they have always a deck-watch to keep, while the amount of machinery to be tended is frequently greater. The ship has to be kept in good order and the cable veered away and hove in as the weather worsens or moderates. Being almost directly on the shipping routes they can speak passing ships. But their exposed position makes them subject to the dangers of collision during fog, as happened to No. 38 light-vessel, sunk at the Gull Station with the loss of her crew some years back, but subsequently raised and, though an old ship, once again in commission. When bad weather threatens, light-vessels cannot like other ships seek a safe anchorage but must ride out the severest gale and continue to mark the shoal and maintain their position through all weathers, fair and foul, to assist navigation, and as their safety depends on their mooring cable it must be of ample strength and sufficient length to meet all conditions of sea.

From the Goodwins we pass up through the Thames estuary with its many and tortuous channels marked by minor lights and buoys, some carrying high pillars and other special daymarks. Thence we go on up into the river with its shore lights and more buoys to guide us until the harbour and pier lights, alongside which our ship will finally berth, come to view.



# The Matto and Campos of Southern Brazil

by J L ALEXANDER

*In November last we published an article which gave a general view of what a European traveller might expect to find in Brazil. Now Mr. Alexander describes a small area of more specialized interest with which he is familiar*

BRAZIL has been described as a land of promise and a land of death, a paradise of "green mansions", and a jungle of green hell. And all that most Britons who have not seen it know about it is that its capital is Rio de Janeiro, and that the Amazon runs through northern Brazil, which is largely composed of tropical forest. But they often know nothing at all about the south, which is very different and may, in the future, attract the attention of Scots and English who wish to settle in a

country where there is peace, every chance of prosperity and, above all, space.

From the southern border of São Paulo, the great coffee-growing state and the richest in the federation, to the northern boundary of Uruguay there is a belt of country roughly 800 miles long and from two to three hundred miles wide where a European can live in a climate that is as healthy and pleasant as the best of the Mediterranean zone. It has been largely settled by Germans, Italians and



*All photographs from the author*

*The family of a Coboclo or Peon of the Matto. They are self-supporting and well adapted to the rough and ready life of the Brazilian forest. Opposite are some of the Zebu cattle originally imported to Brazil from India.*

Poles, and is in consequence at once the most progressive, and at present potentially the most dangerous, part of Brazil.

To the east of the railway which runs from Sao Paulo to Uruguay the country is settled and comparatively developed, but to the west the Campos and forest roll away to the river Parana and the borders of Paraguay. Communications are few and life is primitive.

I spent three months riding through this country to the great falls of Iguazu on the borders of the Argentine, Paraguay and Brazil, and many more living on ranches and in forest huts with men who were struggling to develop virgin land. The country lies about 3000 ft. above sea level and the timber is mostly pine—the Pinho do Parana, of the Araucaria family—which is exported to the Argentine in large quantities from parts of the forest that lie within economic range of the railway. The range is not great and one leaves all sign of modernity and commerce behind after a day's ride westward. The villages along the railway are living counterparts of the townships of the Wild West films—wooden shacks with railed verandahs, dirty 'hotels' where all the guests sleep in one big

loft under the roof, and gauchos and peons or *coboclos*, as they are called in Brazil, drink *caña*, play cards and spit on the mud-covered floor. It is customary to carry a revolver.

My ride to Iguazu began from the small township of Rio Caçador—river of the hunter—in the state of Santa Catharina, and my two companions were true Brazilians of the Interior. They were of mixed blood—descended from Portuguese, who had struggled from the coast, fought the Indians and settled on land which they cleared in the matto, and Indian women and the daughters of African slaves.

Ethnologically Brazil has an interesting future, for almost every European nation is represented, and there is no colour prejudice. Peoples of different origin live amicably side by side and intermarry. A distinct type will, in all probability, be the result.

Below the tall umbrella-shaped pines the matto is frequently shut in by dense bamboo, and it takes a man with a *machete* many hours to cut his way a few miles through the undergrowth. At intervals along the track are large areas of cleared land where oxen, pigs and mules graze on the short mat-like grass.

that has taken the place of bamboo and scrub. These are the clearings in which the old pioneers settled, and the shacks of their descendants are as primitive as those of the early days, built of hand-cut planks, and with mud floors. The old men are patriarchal in appearance, with long straight beards and the Mongolian eyes that betray Indian blood.

The dress of the *coboclo* of the *matto* is as simple as his habitation, and consists of cotton shirt and trousers and broad-brimmed hat of felt or straw. He is practically self-supporting, growing his own maize, beans and *mandioca*—a tuber vegetable which is ground into a flour. His diet consists of this flour sprinkled over a mixture of boiled black beans, mutton or pork and a little rice. He lives contentedly on this all the year round, only varying it with a barbecue on special occasions. He breeds his own stock, and his pigs, wild and ugly creatures, fatten on the fruit of the pine trees. This is like a cone, the size of a coconut before it has had the fibre removed, and splits up into nuts somewhat similar to the Spanish chestnut, and they, too, are good when roasted.

The *coboclos'* chief diversion is derived from drinking *caña*, or *cachasa*, as it is called in Brazil, distilled from sugar cane, and very potent. When there is occasion for celebration an entire ox is roasted in the open and drink is copiously consumed. These fiestas not infrequently give rise to quarrels with tragic consequences that in the rough and ready life of the Brazilian forest are accepted as a normal part of life. The vendetta, too, is still a scourge in the Interior and causes much senseless bloodshed, sometimes even the wiping out of an entire family.

From the *Matto* I rode on to the wide rolling Campos, the country of cattle and gauchos. It was good to leave the monotonous forest and the marshes where the fire-flies twinkled like millions of city lights seen from a distance, and the bull-frogs kept up their unmelodious chorus throughout the night. The Campos of southern Brazil is much more hilly and beautiful than the Pampas of the Argentine. Parts of it reminded me of Salisbury Plain. To me it is the loveliest country that I have ever travelled in. At 3000 ft the air is exhilarating, the sun clear and dry as in northern Italy. At night there are severe frosts and in the morning it appears as though a blanket of snow lay over the land. The rime is so thick that it does not melt until the sun is high in the heaven.

Ranches are large and the houses of the

ranchers are usually a day's ride apart. Occasionally we met trains of pack mules heading for Rio Caçador with cargoes of skins, waggoners going to the forest for timber or gauchos driving the herds many days' journey to market. Their wild cries, the crack of their long whips and the dust raised by the lowing steer I shall not easily forget.

The cattle are mainly of two breeds, the zebu which was originally imported from India and is humped, and the *caracu*, an old Portuguese stock of chestnut-colour and great size. The *caracu* is placid, but the zebu is a wild and lively creature, lithe and fleet as a young horse, and capable of jumping the highest timber. There is a thrill about the quivering alertness of the Campos steer that one cannot feel for the placid cattle of Europe!

Merino sheep are also grazed, but not to any great extent, for men accustomed to sheep are scarce, and the great distance to the railway and lack of motor transport does not make wool a sound economic product. But Brazil needs wool and, at present, has to import far more than she would need if she were to develop her vast agricultural resources. Little, if anything, has been done to assist the rancher, he has remained shut off from the outside world to lead a life which has hardly changed during the last hundred years.

One of the major delights of the Campos is the rivers, not slow tropical streams, but fresh, swift-running waters of the highlands. They are rocky and clear like the rivers of the Fell district, duck abound and on the grasslands there is no lack of partridge and francolin. The chief vermin are the red wolf and the fox, which is sandier in colour than the English variety. Along the rivers are well-timbered open woodlands where bracken and wild flowers grow, and the grass is short and sweet. There is indeed everything to make this Campos of Parana and Santa Catharina one of the pleasantest of ranching countries, except that it still lacks the amenities and economic aids to which the average man of the modern world is accustomed.

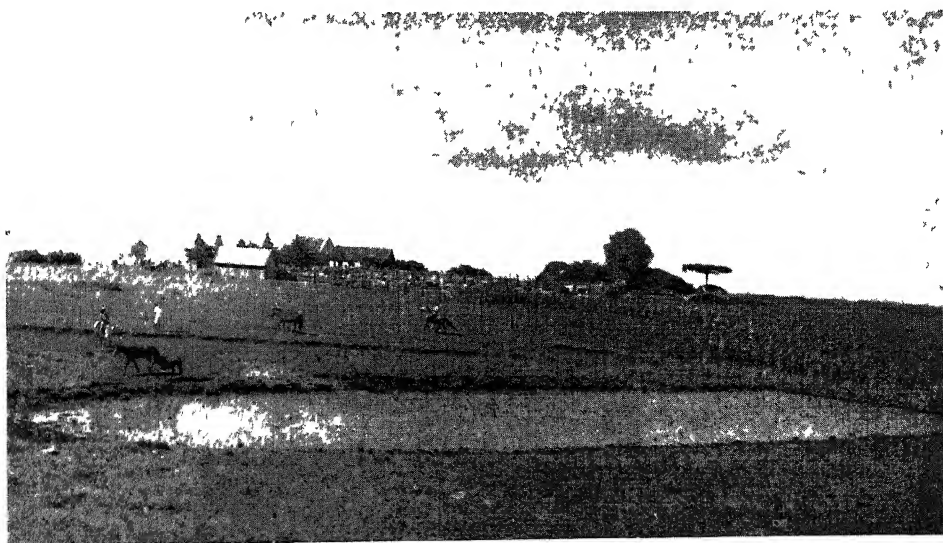
I fell in love with the life of the gaucho, but realized that one would need very simple tastes and have to find entertainment in an existence which lacks almost everything to which one is used if one settled on the Campos in present conditions. It would be reverting to a state of life that has long since passed away in other parts of the world.

The gaucho is a great gambler and loves to hold races between horses from neighbouring





*(Above) Land partially cleared by settlers, who burn the bamboo and scrub which then gives place to grass (Below) In the Campos of Brazil ranches are large and isolated the ranchers often lead a life which has changed little during the last hundred years*





*The small township of Palmas (above) on the western edge of the Brazilian Campos (Opposite) The Sete Quedas (seven steps) falls on the River Paraná*

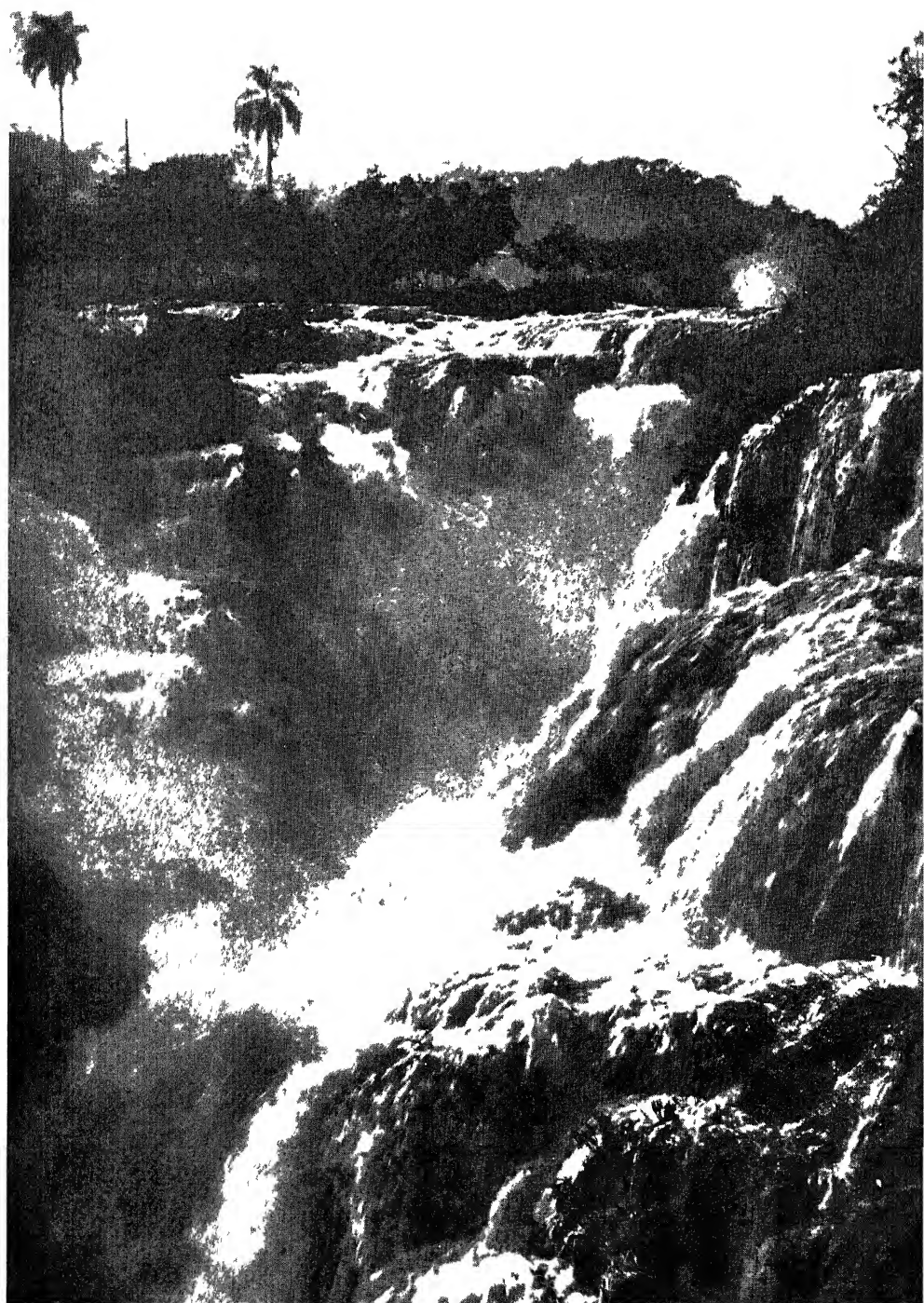
ranches Unlike our own conception of a race, they consist of short sprints between two runners The turf is cut away and a flat earth track, about four hundred yards in length, is laid out The jockeys ride bare-back, and the ranchers and gauchos sit around on their horses or on the ground, smoking and wagering On occasions a man will gamble away the best part of his land

It is a romantic scene The dress of the gaucho is much gayer and smarter than that of the ragged coboclo His bridle, saddle and stirrups are ornamented with heavy wrought silver, the sheepskins strapped over the saddle for comfort are dyed a bright orange or crimson, and over these again is a finely worked sur-cover of soft leather He is a swaggering fellow, in poncho, gay neckerchief and baggy trousers known as *bombachas* His spurs and the butt of his whip are of silver and his belt is embossed with it His chief loves are his horse and his revolver, with both he is an expert

Throughout the Campos and the Matto the

chief accompaniments of social intercourse are the *chumarao* (pronounced chimaron), and the maize leaf cigarette The first is an infusion of green Matté tea made in a wooden gourd and sucked through a silver tube This is passed from hand to hand each man using the same tube, and is replenished from the ever-ready kettle The cigarettes are made of strong tobacco cut from twist and rolled in the dried leaf from the maize cob Matté is not agreeable at first as it is extremely bitter, but one soon acquires a taste for it A strong stomach is necessary if one is to enjoy the native cigarettes, but they too become agreeable after a time

From the small township of Palmas—the only town in this great area of Campos—I went out to see the Indians in their villages They are not a prepossessing people, and show signs of malnutrition Palmas itself is on the western edge of the Campos, beyond it the Matto stretches to Paraguay, with here and there small tracts of grassland which is much less clean than the high country, but, nevertheless, usually settled by some lonely



and remote family of the Matto—a family no member of which has ever seen locomotive or automobile or even a village consisting of anything but a few shabby huts

The pure-blooded Indians live apart in the Matto, sometimes they show signs of being touched by civilization, in that they wear trousers or a cotton shirt, but generally they live as they have since the beginning of time—two-legged animals of the forest—they go naked in the bitterest weather, and their skin is like hide. They sleep in a kind of bag made of moss and leaves. Sometimes they collect bark for dyes and bring it to Brazilian stores for trade. But they are not interested in the white man or his ways. By the Brazilians they are known as *Bugre* or *Indignos*, and are not loved by the rancher, as they emerge from the Matto at night and kill cattle. They skin the carcass on the spot, take what meat they can carry and no trace of them is found. The lingua franca throughout the south is Guaraní which is the language of the Paraguayan Indians. Each tribe has its own dialect, it sounds Mongolian to the outsider.

The Indians are great horse thieves. Their tracks are almost undetectable, and during the night they are liable to lead the grazing horse of the traveller far away into the Matto. It is useless to search, but usually the little men come up with deprecating grins and offer to find the animal themselves on payment of a small sum. It is a fool who turns the offer down. Another unpleasant habit they have is to pass the wayfarer with cordial salutations and then double back into the forest and ambush him.

From Palmas the country slopes gradually

down towards the border of Misiones, the north-eastern state of the Argentine. It becomes hotter and wilder, and the matto more dense and tropical as one travels across the watershed of the river Iguazu. On maps of South America things are often marked which do not exist in fact. For instance, a railway running from Ponta Grossa to Palmas is shown. There is no such railway, only a muddy road across the Campos, built for supposedly strategic reasons during the time of President Getulio Vargas's predecessor. Beyond Palmas the wall of matto which covers the hundred odd miles to the greater sub-tropical forest beyond the Argentine frontier was left as a natural barrier between the two countries.

This country is sparsely inhabited and abounds with game. The pine and thin bamboo of the high matto give way to enormous trees—cypresses, *umbuya*, from which much of the furniture of South America is manufactured, and other giant hard woods. Lianas festoon the branches and bright orchids hang like Chinese lanterns from bough and twig. Brightest of all is the Flame Tree, ablaze with blossom, rose-madder in colour. Snakes are common all over Brazil and in this sub-tropical jungle beside the rattler, the gay coral snake that resembles a Mexican head ornament, the savage flat-headed *javaracaçu* and many others, there are numerous varieties of tree snake, from the boa-constrictor to a sinister yellow and green species, which attains a length of about nine feet. The tracks are narrow and overgrown by thorn, and while trying to avoid being torn to ribbons, to remain in the saddle and to keep



*Indians of the Matto, called by the Brazilians Bugre or Indignos. They take no interest in the white man and his ways and are unpopular with ranchers as they often kill the cattle*

my hat on I have frequently become aware of one of these serpents a few feet from my head. My horse was perfectly trained and would stand quietly while I shot at game or snake with a 16 bore gun or Mannlicher rifle.

I saw many puma, jaguar and ocelot, and, once, what appeared to be a black panther taking a dust bath in my path. The thick hided tapir that looks like a cross between a pig and an elephant crashed through the undergrowth, and sometimes I would come upon a giant ant-eater or a matto dog, a kind of large jackal, nosing in the track. In the rivers, which are slow and shallow, there is alligator and capybara, the world's largest rodent, like a monstrous guinea-pig, amiable and easily tamed, but, unfortunately for him, his meat is deliciously succulent. Among the smaller animals there are the armadillo, also good eating, and the pecare or bush pig which roams in herds and is unpleasantly savage. In the trees the giant sloth hangs in sleep and howler monkeys make a roaring sound that can be heard far off.

Insect life is the main drawback of this territory and becomes worse as one approaches the low country surrounding the confluence of the rivers Iguazu and Parana. The tarantula has no preference as to climate and is found in both highlands and lowlands. Swarms of hornet-like flies, with long sharp proboscis, and small black sand-flies torment rider and horse throughout the day. The butterflies, though beautiful in the extreme and of great size, are a pest. Wherever there is offal or a rotting carcase they gather in their hundreds, presumably for the sake of the salt, and settle, too, in clouds on the traveller's face and suck at the perspiration—an irritating and 'unbutterfly' habit. They have none of the delicacy of their European cousins.

The falls of Iguazu are among the finest in the world, surpassed only by Victoria Nyanza. The name itself is Guarani for Great Waters, and Iguazu is not a single fall, but a vast broken cliff of cascades. The river widens out to approximately two and a half miles and there is a series of cataracts for two miles before the huge volume of water tumbles over a precipice 250 ft high. Some of the falls, especially on the Argentine side, are broken by ledges while orchids and begonias and bamboos of great thickness, palms and tree ferns cluster among the rocks.

To approach the cascades one must cross churning water in a dug-out canoe to an island, and to reach the foot of the falls one must descend the cliff of the narrow gorge below by rope-ladder.

The power of Iguazu is computed at five million horse-power. One day the falls may supply the Argentine and Paraguay with immense electrical force. At present they are untapped. The very wildness of their setting and the absence of sightseers enhances their glory.

From Iguazu I rode another 400 miles through forest and over Campos, having crossed the river to the Brazilian bank below the falls in a ramshackle boat, while the horses had to swim through the racing current. Tropical downpours became more and more frequent, and electric storms. During my three months' ride I heard of no other Englishman having taken the same route, and met no gaucho or coboclo who had previously encountered one in the flesh.

My two half-caste companions were pleasant and loyal, and altogether I did not spend more than about eight pounds during the journey, as we had to live on the country, shooting was strictly for the pot, and what I could purchase from the Indians and settlers consisted only of the essential diet of the interior. The horses often went on short commons and foraged for themselves at night, but, although a diet of bamboo shoots and coarse grass is not good for the wind, my best animal ended the trek fitter than when he set out, and the pack mule, said to be over twenty-three years old, never flagged. The people we met and sometimes camped with were friendly and hospitable, although banditry is not uncommon in Brazil's interior, and the traveller must regard every stranger with suspicion. We were well armed and, although we met some tough customers, never encountered serious trouble. Our worst enemies on the return journey were the swollen tributaries which rushed southward to Iguazu. In swimming these we nearly lost our own lives and those of our patient friends, the horses and mules, upon whom our safe return depended.

Probably the last real foreigners to take some of the trails which I travelled were the Jesuit fathers, who were the first intrepid explorers of the greater part of South America. Misiones is named after their evangelical missions. They moved fearlessly into the Indian country in the 16th and 17th centuries, and I heard many tales of lost churches in the Matto which, according to the Indians, still contain treasure of the Society of Jesus. These may or may not be legendary. I had to race against the rains and even stories of gold and emeralds could not induce me to delay, lacking, as I did, all the equipment and medical stores that are the usual paraphernalia of the modern traveller.



# Cheltenham

## A Regency Town

by HUGH CASSON

*Cheltenham is so well known for its Pump Room, its racecourse and its Colleges that its architectural grace has been largely overlooked. Mr Casson calls attention to its merits as a planned town containing superb examples of Regency building.*

ACCORDING to local legend, Cheltenham's healing waters were discovered in 1715 by a sick horse, which after drinking from a local spring "was cured of a violent humour and other disorders he laboured under." Let us hope the story is true, for there could be no more appropriate beginning for a town whose fortunes are founded upon the twin industries of ill-health and the horse.

As a Spa and sporting centre Cheltenham is of course well known. It should be more widely celebrated for the architectural grace of the background against which these two conflicting functions are exercised, for Cheltenham is one of those rarities, a *planned* town, divided naturally and by design into two zones of interest. The red-faced clamorous world of the racecourse, the stableyard and the bar parlour is to be found in the oldest part of the town which flanks the long narrow High Street. It is a bustling and rather shabby district, veined with narrow alleys and cobbled yards, and pleasantly small in scale. Architecturally speaking, it is as undistinguished and prodigal of styles as the parish church which forms its focus. Buildings of every size, shape and colour elbow each other along both sides of the High Street, interrupted here and there by the standardized façade of a chain store. Crowded, untidy and rather down-at-heel, it might be the High Street of any large county town.

But behind its jerky silhouette of parapet and roof lies the other Cheltenham—a strange, silent, stuccoed, Sitwellian land of parlour-maids, epergnes and chintz, where nothing seems to stir but the leaves of the chestnut trees or a curtain twitched aside in curiosity, and no sound is heard but the tinkle of a teaspoon in a saucer and the bicycle bell of some stray errand-boy.

This is the Cheltenham of the comic papers,

the home of the well-worn jokes about Anglo-Indian colonels and eccentric old ladies. For some reason Cheltenham, like Wigan or Chorlton-cum-Hardy, has always been one of those places which gets a laugh.

Perhaps because they are aware of this and are anxious to avoid it, the authors of contemporary guide-books (the *Shell Guide* is an honourable exception) pay little attention to the residential districts which are the architectural glory of the town, and instead fill their pages with photographs of some constricted piece of municipal 'improvement' or of such hideous buildings as the Winter Garden and the Public Library.

Such distortion of emphasis is unfortunate, for the casual visitor might suppose as a result that the streets of Pittville, Montpellier or Lansdown held no more attraction for the eye than those of Bayswater or Belsize Park. In fact no comparison could be more false, for in these parts of Cheltenham can be found urban architecture at its best—spacious, formal and dignified.

The squares, terraces and crescents of which these districts are composed were nearly all built during the first thirty years of the 19th century. They are, with few exceptions, the work of speculative builders and were erected almost as quickly as any modern suburban estate. As a result, much of the work is ill-considered and shoddy, a collection of smart façades which mark (as they so often do today) poor construction and cheap materials, or, as was said of an earlier period, Queen Anne in front and Mary Ann behind. It has been fashionable in recent years to over-value the virtues of Regency design. In the reaction of taste which will follow it will probably be called, with some justification, copyist and pretentious, theatrical and insincere. As a style it has of course many





*Photographs by Margaret Casson*

*One of the huge terraces built towards the end of Cheltenham's boom period. Its air of solid dignity is in perfect contrast to the dancing shadows thrown across its façade by the trees which line St George's Road*

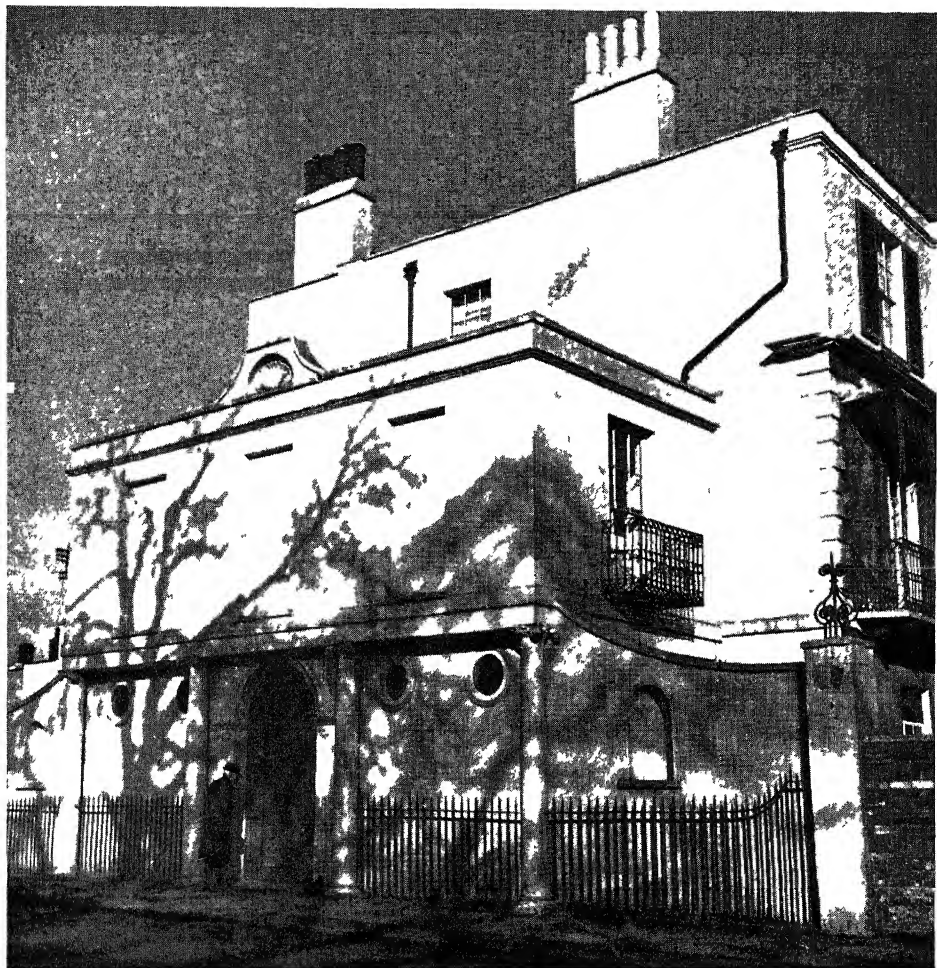


*A characteristic pair of small Regency villas in the Montpellier district of Cheltenham The faintly Gothic detail of the feature in the centre of the parapet is a sign of things to come*

faults, and even in the hands of its greatest exponents it can never claim to be great architecture, for it depends for its effects upon more elusive qualities than grandeur of scale or faultless proportion. The contrast of foliage against gleaming stucco, the luminosity of light-toned paint, the delicate tracery of shadows thrown by the decorative ironwork of balcony and trellis—these are the elements of Regency architecture which delight the eye and create so harmonious a

background for the urban scene.

This architectural harmony is due to three factors—first, the almost universal use of stone or stucco as a facing material, secondly, the discipline of form imposed by the contemporary rules of style which, with certain regional variations, were unquestioningly followed by architect and builder alike, and thirdly, the fact that Cheltenham, like all resorts, depended upon well laid-out amenities to attract visitors. The results here of



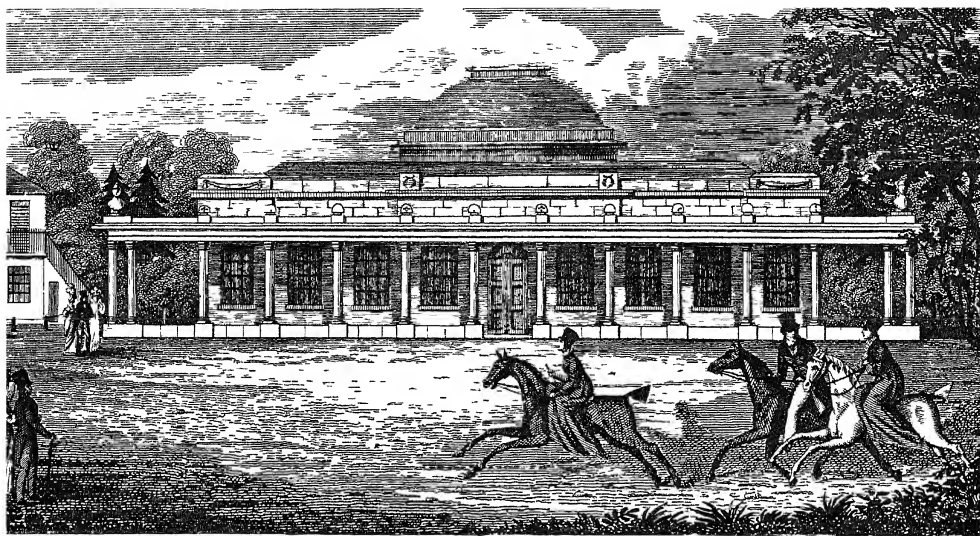
*This porch to a house in Montpellier Drive is almost certainly the work of Papworth. Its perfect balance and excellent detail render it, despite its insignificant size, one of the most distinguished pieces of design in Cheltenham*

this unity of material, design and purpose are completely successful. The striving for stylistic individualism which was to disintegrate urban design did not appear in any strength until half-way through the 19th century, and by then, happily, Cheltenham's building boom was over.

This boom was the climax of a movement which had begun over a century before. As early as 1740 Cheltenham possessed a saline well and an avenue (laid out by a Captain

Skillicorne) for the morning parade of visitors. But it was the visit in 1788 of George III which gave the real impetus to the town's development. Following the royal example, fashionable crowds flocked to Cheltenham, which soon began, so it was said, "to rival Bath in its indolence and folly". The old wells in the centre of the town showed signs of being unable to cope with the demand and speculators began to get busy.

In 1801 Henry Thomson bought 400 acres



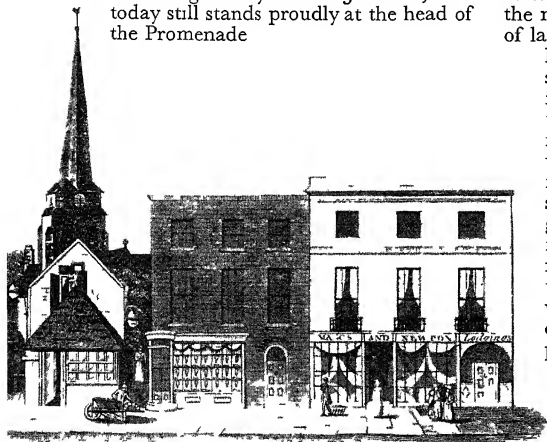
*Prints from the Cheltenham Art Gallery and Museum*

*The Montpellier Rotunda, built in 1825, was Papworth's first important commission in Cheltenham. The colonnade in front is a relic of the earlier building and was designed by Forbes. Below is a view taken from a contemporary trade card of the Parish Church seen from the High Street*

of land where, to the south of the town, a spring had been located. Here on the Montpellier and Lansdown estates he built a pump-room, a pleasure-garden and a small museum. This new healing centre was some way from the High Street, and in an effort to intercept the questing dyspeptics a rival spa was established in 1818 half-way along the route. This, the Sherborne Spa, was financially a failure, and the pump-room was replaced twenty years later by the Queen's Hotel—a magnificent cliff of white stucco, Corinthian columns and gilt lettering which was designed by R. W. Jearrard, and today still stands proudly at the head of the Promenade.

Montpellier Spa meanwhile prospered, and Thomson's son Pearson launched into bolder schemes of development, employing as architectural adviser a London man called J. B. Papworth. The pump-room was rebuilt, squares and terraces were laid out, churches and parks provided. As a result of this extravagance Pearson Thomson got into financial difficulties and had to emigrate to Australia.

Until 1824 the development of the town had been confined almost entirely to the south side of the High Street. But in this year Joseph Pitt announced the project of Pittville Spa, which was to be laid out on the most ambitious lines on a hundred acres of land to the north of the town. A spring had been discovered on the crest of a small hill at the far end of the site, and it was here that Mr Pitt laid the foundation stone of his new £60,000 pump-room. The architect for this building was a local man, J. Forbes, and it is not his most successful work. It is a stilted, high-shouldered and rather graceless building whose appearance has not been improved by the removal in recent years of the statues which at one time crowned the parapets of the side wings. Forbes in fact was a designer of only mediocre talent and his work, particularly in its detail, is often a



*Chapel and Farm House.*

curious mixture of provincialism and pedantry

Pittville was another financial failure. Speculators held back, and though Pitt himself courageously proceeded until his own money was exhausted, the scheme was never completed.

By 1840 the fortunes of Cheltenham were on the decline. Improved travelling facilities led to the increasing popularity of Continental spas, and Cheltenham itself was swept bare of fashionable pleasures by the reforming energies of its leading churchman, Dean Close.

Such in brief is the history of Cheltenham's boom period, but it would be incomplete without some account of the life and work of J. B. Papworth, to whose influence the architectural distinction of the town is so largely due.

John Buonarotti Papworth—he was induced to assume the second name in 1815 by some admiring friends—was born in 1775, the son of a well-known master plasterer. As a youth he studied drawing, perspective and sculpture, and later, upon the recommendation of Sir William Chambers, to whom some of his early drawings had been shown, he entered the office of an architect called John Plan. He remained here for some time before deciding to widen his experience by working in turn for a builder called Wapshott, and an interior decorator in Great Marlborough Street.

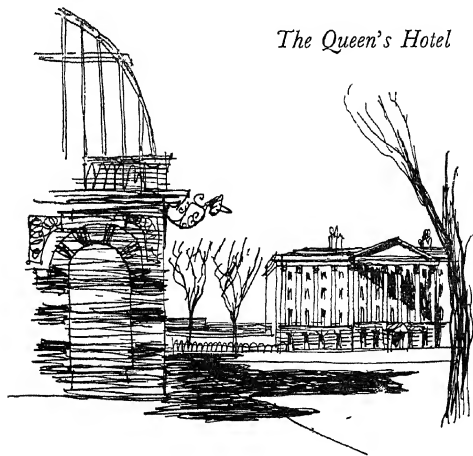
Upon the basis of this varied and practical training was founded a highly successful career. His practice consisted mostly of domestic alterations (or as his biographer prefers it, "the embellishment of the residences of the nobility and gentry"), but besides the normal work of an architect he designed an extraordinary variety of objects—carpets, chandeliers, garden seats, even pocket-handkerchiefs. He designed furniture for Brooks's Club and a gold-fitted dressing-case for the spendthrift dandy, Ball Hughes. He designed one of the earliest gin palaces, a headpiece for the newspaper the *Nation*, and a medal for the Royal Humane Society. He designed the decorations for the first steamboat to ply upon the Thames, called *The Engineer*, including a figurehead depicting Science inscribing a problem of Euclid upon a tablet.

As a sculptor and water-colour painter he exhibited frequently at the Royal Academy and he was a prolific journalist, publishing treatises on such varied subjects as dry rot, ornamental gardening and industrial design. He was appointed the first director of the Government Art School at Somerset House,

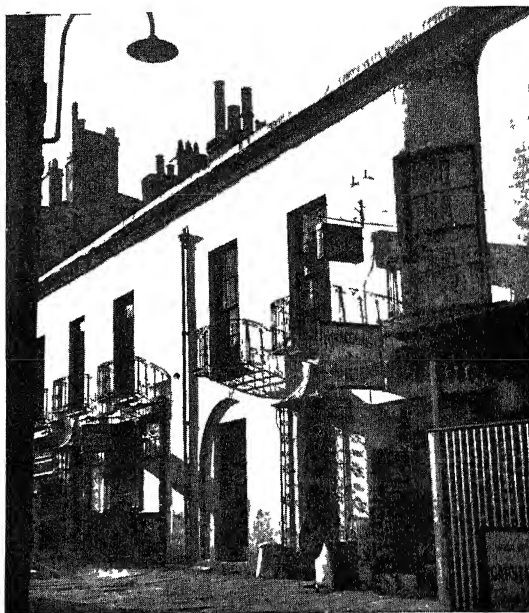
and in company with such distinguished architects as Barry, Burton and Hardwick, he was one of the founders of what is now the Royal Institute of British Architects.

Nor were his activities confined to England. He designed for the King of Wurtemberg a palace and park "in the English style" (a scheme which so delighted Lord Elgin that he asked to borrow the drawings for a time), a chandelier for the Shah of Persia and some steam-yacht decorations for the Pasha of Egypt. He designed a façade for a building in Rouen, an interior for a New York bank, and the lay-out, never executed, for a new town on the banks of the Ohio which was to be called 'Hygeia'.

His work at Cheltenham was carried out at the height of his career. In 1825 he designed for Pearson Thomson the new Montpellier pump-room known as the Rotunda. It is a shapely building, well suited to its purpose, gay without being too exuberant, restrained without being too severe. Despite its low silhouette it dominates the district with the confident swell of its copper-sheathed dome, and is perhaps the most imaginatively-designed building in the town. Today it looks shabby and weather-beaten, but a century ago it was the scene of many dances, parties and musical evenings when, relates a contemporary diarist, it was affecting to watch the assembled company "with the flush of partial or returning health brightening every countenance". The success of this building led to other commissions from the same client—Lansdown Terrace, with its impressive, elaborately modelled façade, Suffolk Square, a couple of churches, and then, adjoining the Rotunda, the charming little row of shops, Montpellier







(Left) *A fine example in Royal Crescent of the decorative ironwork for which Cheltenham is famous*  
 (Right) *Curious window treatment to be seen at the back of the Montpellier Rotunda*

Walk, with its row of caryatides. This, with a few houses, constitutes the sum of work in Cheltenham known to be by Papworth's hand, but it seems likely that he provided drawings for many other buildings in the town. The original lay-out of the Pittville estate, for instance, was almost surely planned by a more skilful designer than Forbes. The imaginative counterplay of vistas, the subtle conflict of romantic informality and classic symmetry are evidence of a sophistication which in Cheltenham is only found in the work of Papworth.

Despite his versatility and industry (his office hours were 9 to 7), Papworth never reached the greatest heights of his profession. He was, for example, consistently unlucky in competitions and he was never elected to the Royal Academy. But although he was not a designer of the first rank, the results of his work at Cheltenham are a memorial of which any architect could feel proud.

It is customary to associate towns with the names of prominent residents or 'characters'. Of such persons Cheltenham has naturally had its share, among them George III and the

Duke of Wellington, Mrs Siddons and Dr Jenner, Thackeray, Byron, Tennyson and Fred Archer. As for 'characters' there have been John Millbank the muffin-man who was only three feet eight inches high, and Sally Saunders the postmistress of 1800 who would keep letters five or six days, saying—and who will blame her?—that she had something better to do than to take a single letter to the bottom of High Street.

But though the great personality and the eccentric rarely make much mark upon a town, their names are usually remembered while those of the man who laid out its streets and designed its famous buildings are either forgotten or unknown. Everyone has heard of John Nash of London and of the Wood family of Bath, but who remembers Fowler of Exeter, Foulston of Plymouth or Thompson of Glasgow? As for those who today wander in admiration through the stately streets of Regency Cheltenham, they should remember with respect the names of Skillicorne and Pitt, of Thomson, Jeardard and Forbes, but, above all, of John Buonarotti Papworth.



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# Cairo



Der en Leish

by MARY ROWLATT

*Last November Miss Rowlatt described for us how progress and modern times are affecting the women of Egypt. In this article she goes back into the past, to the historical background that gives the Cairo of today its character and atmosphere*

Most people can conjure up a more or less accurate vision of the cities of ancient Egypt, and the capital of modern Egypt is well known, by hearsay or experience, to almost everyone. But in between the two eras lies a long gap. What sort of a Cairo linked the city of the Pharaohs with the city of Farouk?

In the days of the Old Empire, Memphis was the city which stood on the Nile banks not far from where modern Cairo now is. It was a flourishing metropolis in the very earliest days of Ancient Egypt. Later on its importance began to wane, for Thebes (the modern Luxor) became Egypt's capital, and Memphis diminished in size and importance until, when Egypt fell into the hands of Rome, a new centre was built on the east bank of the Nile.

A giant broken statue, lying prone among the palms, and an alabaster sphinx with

children and goats jumping on and off it—these are almost all that remain of Memphis today, but enough of the Roman fortress stands to give an idea of its buildings. A great bastioned gate stands hidden away among the small dwellings of Coptic Old Cairo. You have to descend to it, as the level of the ground has risen considerably. Antiquarians reckon that a rise of a foot each century, of rubbish and dust beaten down into the highway, is a fairly accurate estimate.

The sounds and cries of the present day grow faint as you stand under this great, silent gateway. Cairo has other gates almost as ancient and other relics far older, but they appear to be alive, as if still playing a vital part in the character of modern Cairo. Was it because the Romans took much and gave little that there is a deadness about the fortress they have left?

These fortifications built for defence saw hardly a blow struck. In view of the increased decadence of the Byzantines it is perhaps not surprising that Cairo succumbed completely, in A.D. 641, to the next invaders, virile men of the desert to whom austerity had not become a mere word but was indeed a quality of life. Their general, Amr ibn Aas, founded a city just south of the Roman gates. His pitched camp formed the nucleus of it. This is now ruined, in open land, but wandering over the site it is easy to picture its past. Bits of ceramic, fragments of textiles and old coins lie about for curious travellers to examine. The first mosque in Egypt was built by Ibn Aas, and there it stands today — a large square enclosure cloistered by many varied columns.

So Egypt became an Arab province, ruled by a military governor under authority from Baghdad for about 200 years, when a young, high-handed governor called Ahmed ibn Touloun arrived. Bit by bit he gathered power and popularity till he was able to cut himself off from Baghdad, proclaim himself an independent ruler and found a hereditary dynasty. Immediately he built a magnificent mosque on the high ground of el Qatai to the north-east of Fustat. Today, as you approach his mosque, still one of the finest Arab monuments in the world, its high fortress-like walls soar above the surrounding dwellings, for it stands in a very poor quarter of Cairo. Steps lead you up and through two gateways into an arcade which runs round all sides of a vast square. The arches are carried on piers, three deep on three sides, but on the side towards Mecca they are six deep.

The courtyard is usually in blazing sun, but your eye, as it travels down the arches, sees them cross and recross each other in ever-deepening shadow into the furthest distance. The soffits of these arches are carved in stucco with intricate geometrical designs. They were only discovered a few years ago under many layers of whitewash. In some places there was only a fraction of the pattern left, but modern Egyptian workmen deduced the whole from the portion that remained and reconstructed it with remarkable ability.

\* \* \*

One of the most fascinating things about Cairo today is that with comparatively little knowledge you can recognize roughly the date and origins of the innumerable ancient buildings in the old quarters. The type and arrangement of inscriptions is one sure guide. For instance, the angular Cufic script was in use until Saladin replaced it with the flowing Nashki script in the 12th century. The spidery

Turkic hand was seen only after the Turkish invasion of 1517. There was a fashion at one time of having inscriptions in a series of ornamental brackets. This is found near the end of the 13th century and the beginning of the 14th. There is an interesting wooden inscription running round part of the interior of Ibn Touloun's mosque. It is in Cufic and dates from the foundation. The ground level of a building, as I have said earlier, also shows its date. As you walk down one of the narrow crowded alleys you may see a mosque some five feet below the road level, it will almost certainly be about 500 years old. A bit further on you may come to a building with an eighteen-inch drop to it; this will be an early 19th-century structure, and so on.

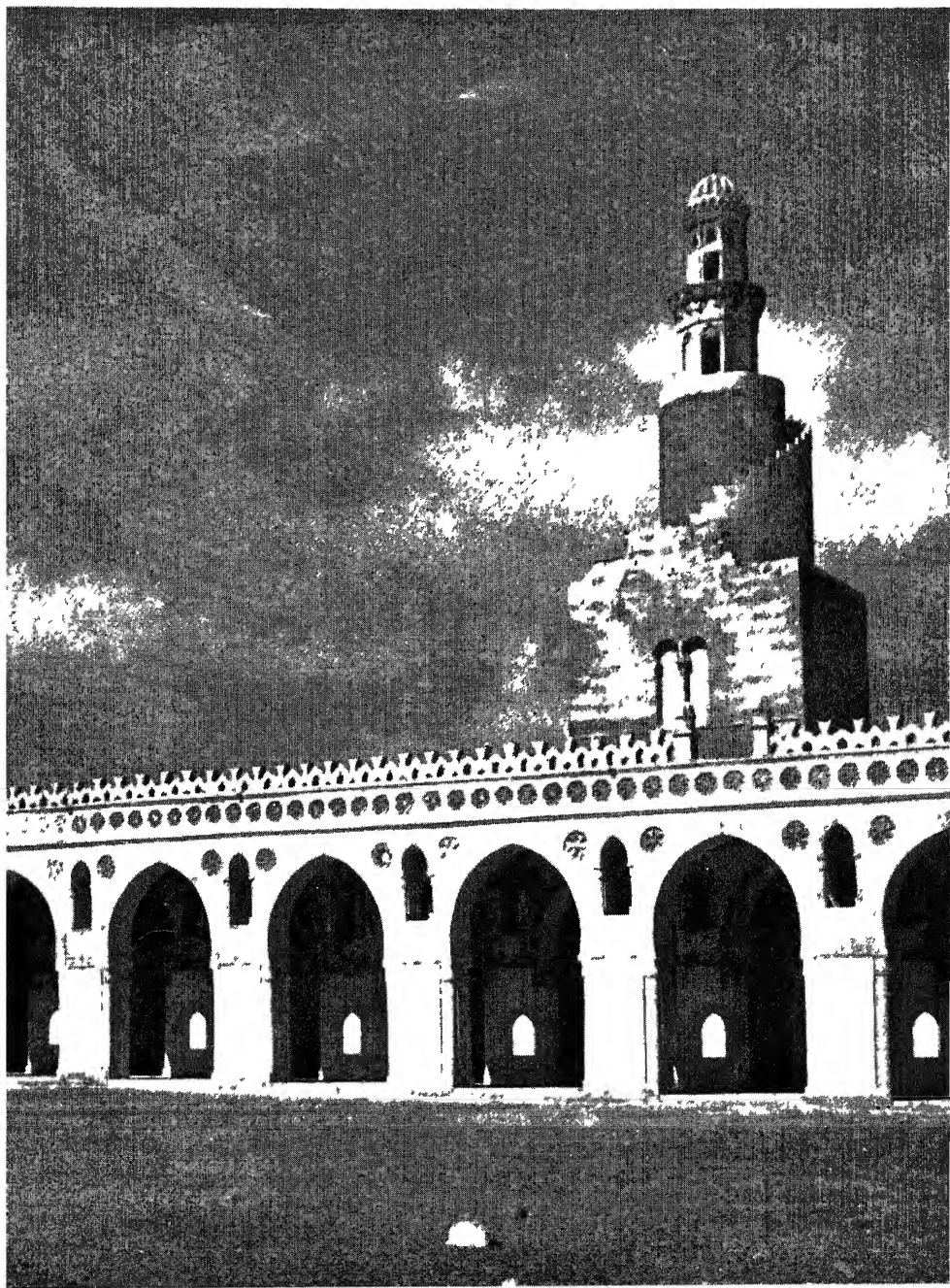
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The 10th century saw an important new phase in the development of the city we now call Cairo. A Fatimite ruler invaded Egypt from the west and founded a city somewhat to the north of Ibn Touloun's centre. Astrological omen carried great weight in those days. Mars, known to the Arabs as the Conqueror of the Heavens, was in the ascendancy, so the new city was named the Conqueror *el Kahira*, hence the word Cairo. This Fatimite era was one of lavish living, and of immense wealth and power which alternated with periods of poverty and starvation.

Nasir-i-Khusraw, a famous Persian traveller of the 11th century, has given a first-hand description of Fatimite Cairo. Many thousands of people lived in the royal palace and the number of palace servants ran into five figures. He saw great galleys on the Nile. The streets were fine and well illuminated at night. He describes the young ruler of the time as being simply dressed and clean-shaven. Nasir-i-Khusraw saw him riding by on a mule to some festival, and the ceremonial umbrella carried over his head was encrusted with jewels.

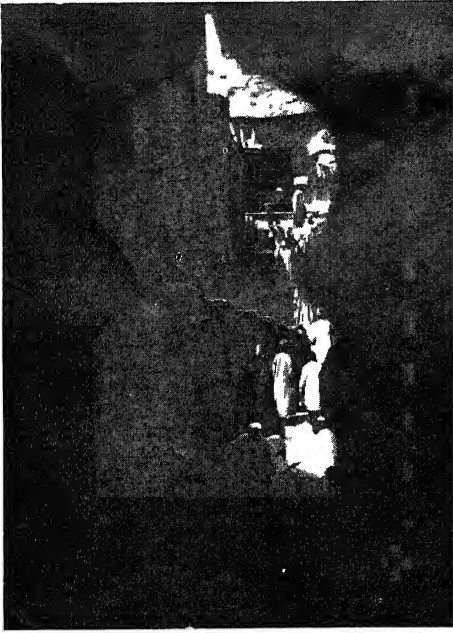
It is interesting to note how the people's morale and character seemed to stand firm through the first stages of wealth. Goods were sold at fixed prices and any shopkeeper discovered cheating was taken round the streets on a camel, ringing a bell and declaring to all passers-by in what matter he had been dishonest. But somewhat later we get descriptions of drinking bouts with amber cups, of immense banquets off gold plate, of fabulous jewelled clothing, of chess played with gold and silver pawns, and of a ruler out of touch with his people, idling in his palace and scoffing at the faith of his fathers. After this, with deadly speed came the crash, and the Caliph's own family had





Tom Murr

*When Ibn Touloun became Governor of Cairo in the 9th century AD his first act was to build a magnificent mosque, still one of the finest Arab monuments in the world This view shows one side of the courtyard*



Oscar Marcus



Oscar Marcus

(Left) A busy sunlit alley seen from the upper window of a dark, cool interior (Right) El Azhar University, founded 1000 years ago, to which students still come from every corner of the world All wear time-honoured robes as seen in this photograph

to move to Baghdad to escape starvation

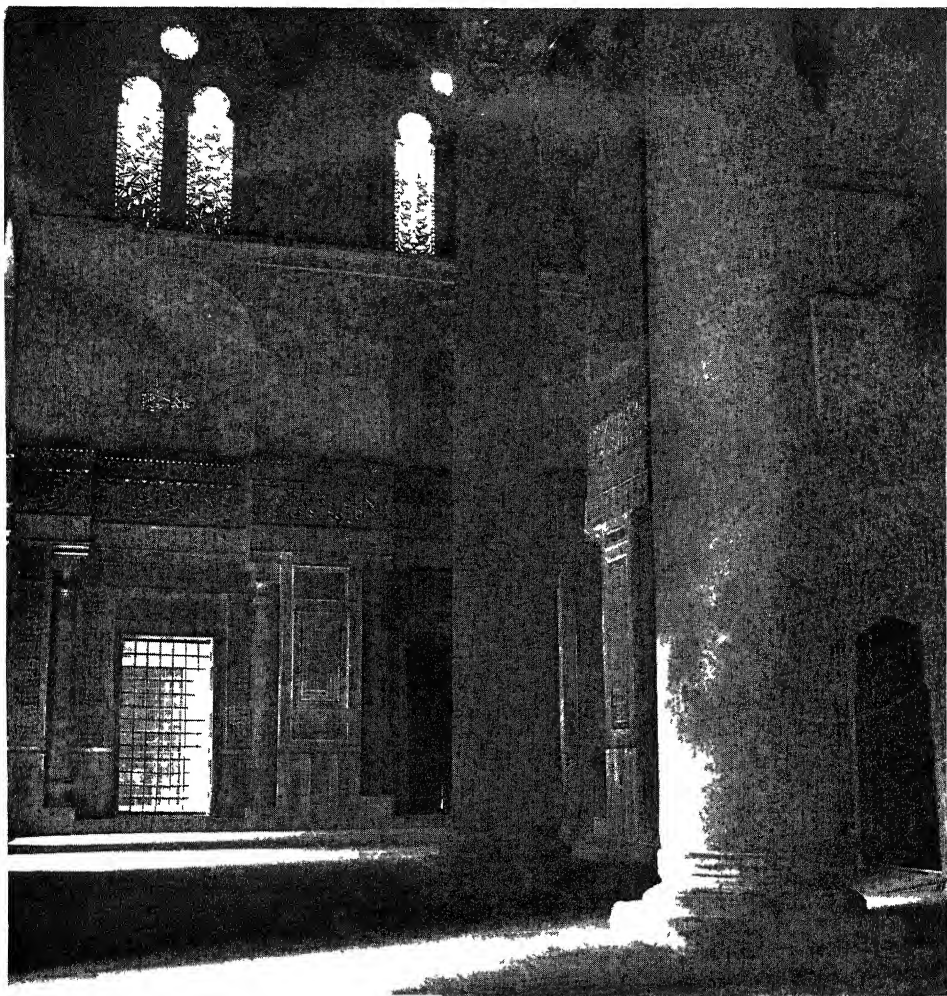
No trace is left today of the great Fatimite palaces, but the name on a certain narrow highway of Cairo's old city proudly states that this is "The Street Between the Two Palaces"

\* \* \*

During this era el Azhar University was founded. It has been the heart of Islamic learning for just on 1000 years. The establishment remained almost unchanged from its foundation till a few decades ago, when some of the curricula were altered. Students still come from every corner of the world. You may pass a slant-eyed young man from Central Asia, a small-limbed neat Javanese and a dark Abyssinian, in the course of a few minutes. As you step across the threshold you might be back in almost any century—the 18th, the 15th, the 10th. Students and professors wear long robes and turbans. The students sit cross-legged on the ground in groups, with the lecturer, also cross-legged, on a bench in the centre, as he expounds some point of jurisprudence or theology. But any

outsider who thinks that this scene is peopled by archaic figures somehow left behind by a remote past is highly mistaken. These men wield great power in the modern Islamic world.

One of the most remarkable relics of this period is part of the encircling wall of Cairo with three great gates, built for a Fatimite ruler between 1087 and 1091, which still stand in all their strength. If you are sufficiently enterprising to visit them, an aged individual will light the stump of a candle in a little lantern and beckon you on into the darkest of winding stairways, which leads out on top of the Gate of Victories. Though built several years before the first Crusade left Europe, these gates have many similar features to the great crusading castles of Syria, and of Europe too, which show the extent to which the Crusaders borrowed from the architecture they found in the countries they entered. Standing above this magnificent great gate you can look down, through the holes made for boiling oil and missiles,



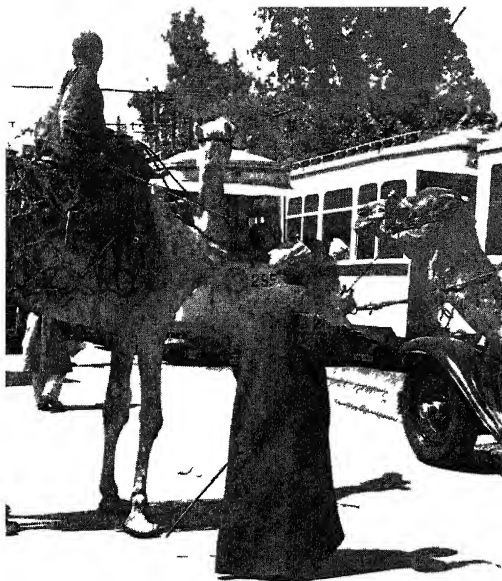
*Toni Muir*

*The 13th-century mausoleum of Galaoun, a famous Mameluke Sultan of Egypt, and one of the Crusaders' most formidable opponents. The huge columns are of granite, the inscriptions from the Koran round the wall are in brackets and circles common to the period, below them are coloured marble mosaics*

onto the noisy Cairene passing in and out below. He shakes his vegetables under the nose of a prospective buyer, he shouts out the beauties of his cool drinks, or just tuppets along into the city on his little donkey.

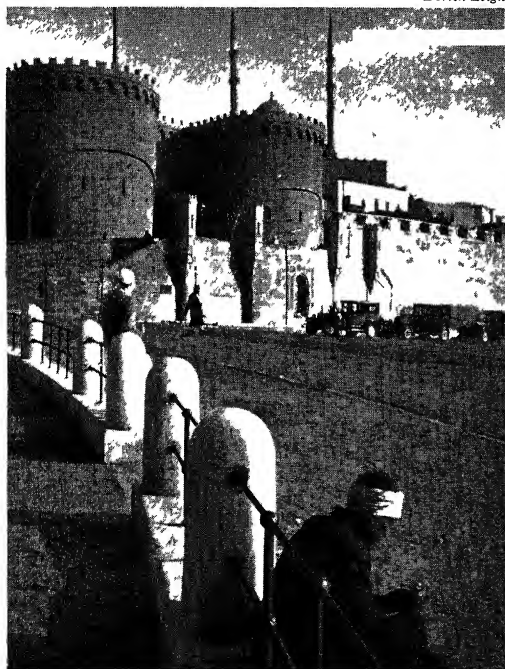
A pace or two further on the old man who is guiding you will lead you down some steps into a pitch-black passage, the internal gallery of the wall itself. Before entering, it

is interesting to notice two blocks of stone built into the masonry, carved with ancient Egyptian figures and animals in delicate relief. These medieval builders of Cairo often made use of strong material lying about, already quarried, ornamented and used many hundreds of years before. It gives you quite a start to see a fat little hippopotamus embedded in this austere military architec-



Oscar Marcus

(Above) Daily mixture of ancient and modern in a Cairo street (Below) Gates leading up to the Citadel, first fortified by Saladin in the 12th century It has held troops from that time to this British and Egyptian soldiers are both garrisoned there today



Dorrien Leigh

ture You cannot see an inch without the old man's candle, but by its light you can just make out the beautiful masonry of this *chemin de ronde* The passage is about six feet wide and considerably higher It has a convex ceiling and before the days of artillery was impregnable indeed Here and there it is lit by small apertures in the roof and slits to shoot through, occasionally it widens into silent guard-rooms The tread of your feet is muffled by the thick layer of dust, it is eerie and mysterious and the old man makes the most of it He points his bony finger at a dark patch of ordinary damp on the wall and murmurs in Arabic the one word, "Blood" After a bit you see the light of day again and emerge up some steps onto the wall above the gallery Some of the building on the top here dates from Napoleon's campaign in Egypt He is responsible for the towers at intervals along the wall bearing the names of his officers, "Tour Corbin", "Tour Milhaud", etc, inscribed upon them Napoleon, too, built the battlements facing into the town, for he was as apprehensive of insurrection from within as of siege from without Near here a spiral stone staircase leads down to the other gate,—the Gate of Conquests This is one of the most spacious and well-built spiral ways in military architecture anywhere in the world

\* \* \*

The next important development of Cairo after the Fatimite era took place in the 12th century, and the man responsible for it is almost as well known in the West as in the East—Saladin He it was who first fortified the heights overlooking Cairo from the east, now known as the Citadel It has been a garrison for troops of one sort or another from his time until our own, without a break Today, British and Egyptian soldiers are both quartered there The 12th-century fortifications, the later Turkish ones, and what modern masonry there is, are all one whole The British Tommy plays football there, beside a wall built possibly by his ancestors 800 years ago, for Saladin used prisoners of war, captured in his fights against the Crusaders, to build these ramparts

Sometime in the 12th century, Fostat—Amr's 7th-century town—was abandoned The heart of Cairo had moved with Ibn Touloun and the Fatimites to the north and to the east, leaving Fostat as an outlying part of the city When the Crusaders' advance looked menacing to Cairo, Fostat was evacuated and deliberately burnt—an early instance of the scorched earth policy

By this time Cairo had had some redoubt-

able rulers, evil and good, from Hakim, who terrified his subjects by roaming the narrow streets at sundown in disguise to see if his insane and cruel laws were being carried out, to the saintly Sultan Saleh, who often sat in the market-place in simple clothes making baskets while he addressed the passers-by on spiritual matters. This Sultan was one of the last of Saladin's family. The next rulers were from the famous Mameluke dynasties. Their empire stretched from Cairo up beyond Aleppo, east far across the Jordan and southwards into Arabia. Cairo was always the primary capital and Damascus a secondary one. These two cities were linked by an efficient pigeon post service which took letters from one town to the other in a few days.

The whole empire was traversed by a vast system of post horses. Sultan Beybars, one of the most outstanding Mamelukes, boasted that he could play polo in his two capitals in the same week, which was indeed an amazing feat of endurance and horsemanship. In cafés and meeting-places of Cairo today, storytellers still recount to rapt audiences tales of this popular hero's might.

Sultan followed Sultan in quick succession. Many achieved power through a chain of dramatic murders, few died in their beds. They administered their large empire sometimes with a rough justice and foresight, but always with vigour. At the same time, they led their armies in major campaigns against the Crusaders and the Tartars. The old Arab chroniclers give graphic descriptions of this warfare and they show how the common people of Cairo followed its fortunes with enthusiasm. The populace was kept well posted with news. One historian describes the scene in Cairo at a moment when the news seemed bad, though victory was gained in the end.

The people put extreme zeal into their prayers [he says] and all applied themselves to reciting the Koran. Gathered together in the mosques they cried aloud and gave themselves up to fervent prayer. That same day pigeons arrived with perfumed wings, bearing letters also perfumed announcing the great news of the Tartar defeat. Postal runners arrived as well, with despatches confirming this news. Loud music was heard. Cairo and the Fort of the Mountain were imposingly decorated and an order transmitted to the different provinces prescribed the same signs of rejoicing.

In addition to their intense preoccupation with war, the Sultans and the leading men of Cairo often managed to accumulate vast wealth by fair means or foul. They spent a great deal of it in embellishing their capital city with a succession of splendid monuments,

many hundreds of which contribute to form the glory of Cairo today.

During these centuries the city was a strange mixture of barbarism and culture, of savagery and civilization. A standard was set in design and workmanship which has probably never been surpassed. The joy of beautiful things beautifully made speaks clearly from the wealth of objects left for our enjoyment today, as apparent in small domestic things as in work done for special purposes. For instance, the simple earthenware water jug of those days (almost the same as the jugs still used) had a little filter formed in the neck to prevent things from falling in and polluting the water. The filter is made of earthenware and a few holes pierced in it would have served the purpose adequately, but the designer made the most lovely intricate patterns in the strainer which, being in the neck of the jar, was hardly seen at all. Another instance of this delight in lovely things for their own sake is a certain beautifully worked brass box with silver and copper inlay. A strip of this silver had come away and, behold, the workman had chiselled a charming little pattern inside the groove he had made to hold the silver, which, as far as he knew, would never be seen again by anyone as soon as he had hammered the metal into place on top of it. The technique and love of making beautiful things still lives in many an old Cairo artisan of today and is dormant even in the younger ones. In some instances it is being developed, though sometimes it is taking on a warped and unreal expression.

The Mameluke period never produced, in architecture or in fine art, a style comparable to the overflowing Baroque of Europe. Whether this would have developed later it is impossible to say, for a great flood from the north was to break on Cairo under which the Mameluke power and artistry were to be completely and suddenly submerged.

The Ottoman Turks who had captured Constantinople in 1453 were now flooding south through Syria. Cairo rushed to the defence of its invaded provinces. A great battle was fought but the odds went against the Egyptians. The Mameluke cavalry were broken and overrun. News now reached the capital that the Turks were advancing with that morale-destroying new weapon, gunpowder and cannon. Cairo immediately hired some cannon from the Republic of Venice at an exorbitant price. There was no time for bargaining, but unfortunately neither was there time for learning how to work the cannon properly. In March 1517





*Tom Muir*

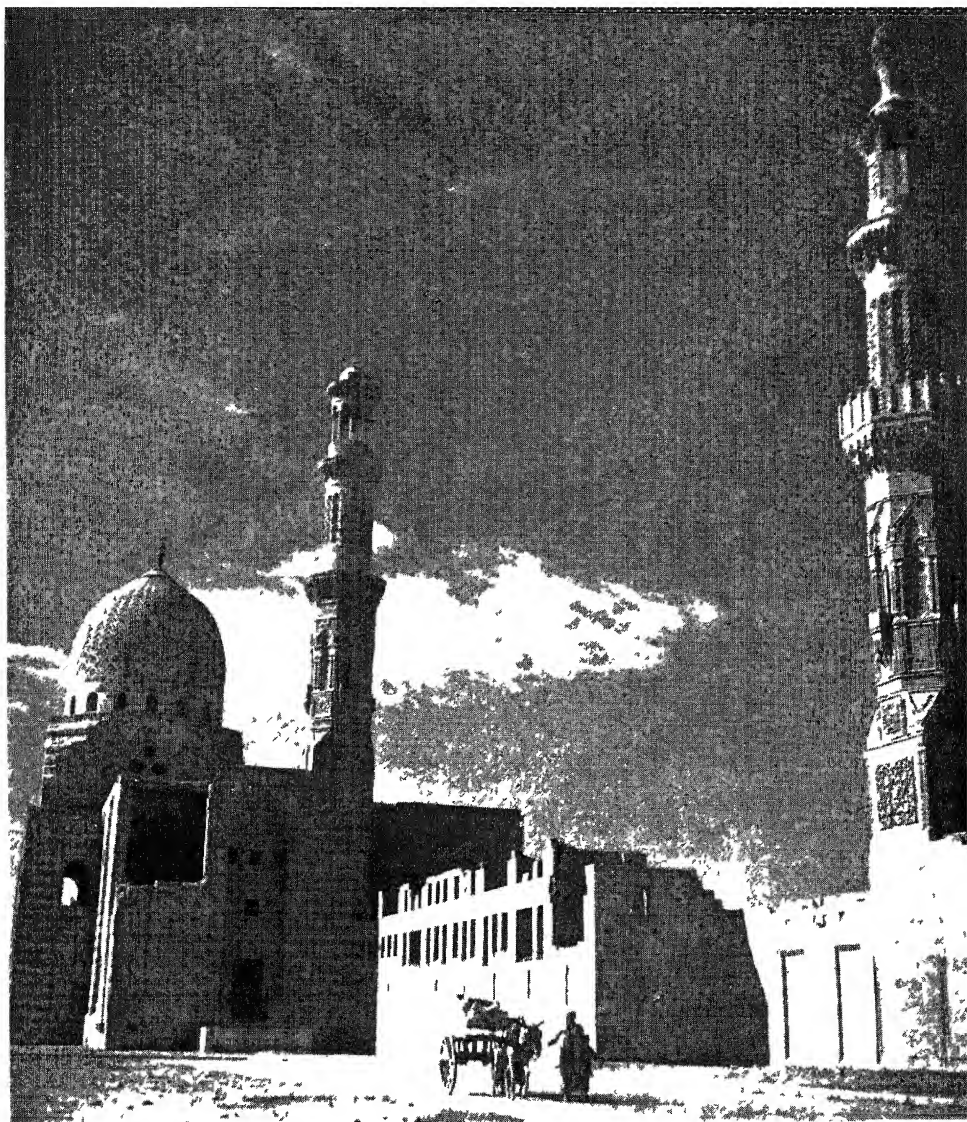
(Above) *The old river boats which bring merchandise from the interior to the capital, to unload it on the wharves of ancient Cairo* (Opposite) *The 14th-century tomb-mosque of one of the Mameluke rulers of Egypt before the Turkish conquest*

the last Mameluke hung, a limp body, over one of the great Fatimite gates and Cairo settled down to hundreds of years as a comparatively poor and uninspired town under Turkish domination, ruled by a governor sent from Constantinople. About as many mosques of note remain to us from the next 300 years as from any thirty years of Mameluke rule.

The special architectural legacy of Turkish times is several fine specimens of domestic architecture. Up to then, all houses and

palaces seem to have been pulled down and rebuilt, or lost in earthquakes or fires. But from the 16th century onwards we have at least a few old houses left. They are mostly dwellings of the well-to-do merchant type of owner. They are large and rambling, for Eastern families all lived under one roof, and the word 'family' was taken in its widest sense. The sons usually brought their brides back to the one house. Orphaned cousins, widowed aunts and old retainers, all made their home together. The building usually





*Toni Murr*

ran round four sides of an open square. Of such is the 18th-century house of es-Shemy. The courtyard is a garden of orange trees, a tall date palm and coloured creepers. The main doorway of the house, giving in from the street, is almost fortress-like. A heavy door opens onto a vaulted elbow entrance. This is partly for the sake of privacy, for when the door is opened you still cannot see into the courtyard, and partly to make it easier to defend against marauding bands of robbers which were often a great menace in those days.

As you enter the courtyard an open loggia faces you on the opposite side. Visitors were received here, and tucking up their feet under them on high wooden seats, would discuss the affairs of the day over little cups of bitter coffee. There is another loggia on the first floor facing north. This is constructed specially for summer use, to catch any north breezes that there may be, and is also used for the reception of male guests. When such visitors are about, the women are never seen, but nevertheless they really have the whip



Black Star

hand of the men, for behind their *mushrabia* wooden screen windows they can see and hear all that goes on in the courtyard and both loggias without being detected themselves. The indoor reception rooms have delightful little coloured marble fountains of trickling water, for coolness in summer. These rooms were heated in winter by decorative copper or brass charcoal braziers.

During these Turkish centuries life in Cairo must have been in a minor key compared with that of previous eras, but it was not without colour. The varied expressions of Moslem religion continued through these drab years. Circumcisions or weddings were occasions for processions through the streets. Jugglers and dancers formed part of these processions, and as they wound slowly along passers-by were encouraged to put down their goods and chattels, stop what they were doing and join in the fun and gaiety. Each saint's day of note was celebrated by a *moulid* or fair which included shadow plays, performing animals, stalls of sugar sweets and so on.

*Zikrs* were held in the evening at these fairs. They are religious ceremonies which consist mainly in repeating the name of God in unison over and over again, with a bowing of the body until a type of trance is reached. Moulids and *zikrs* are held today and festive processions too, but in Cairo the latter have to conform to police regulations and much of the picturesqueness has had to go. However, the spirit of good-humour and simple faith remain amazingly alive.

An early 19th-century writer, Edward Lane, gives a fascinating description of one old ceremony whose origins are lost in antiquity—the cutting of the Khalig dam. The Khalig was a canal that entered Cairo from the Nile and traversed most of the city. It was only filled with water when the Nile was high. Until the river reached the required height it was kept out of the canal by a dam. The Khalig was finally filled in some seventy years ago, owing to its insanitary condition when the Nile was low. It is now a roadway.



*Black Star*

*(Opposite) One of Cairo's famous fashionable hotels, a fine opera house faces it, (above) scene in the ancient copper bazaar just ten-minutes' walk away. The lemonade seller is equally at home in both quarters. His drinks are as popular with the modernized young Egyptian in European suit as with the medieval-looking craftsman.*

The mixture of centuries in Cairo today is indeed bewildering. A five-minutes' walk will transport you from an Arabian Nights city to a pre-war Paris. But no sooner have you adjusted yourself than you realize that the situation is more complicated still. The medieval gentleman in flowing robes with a white beard is listening to the wireless as he hammers out a bracelet of beaten gold. A few minutes later, as you wait in your taxi for the red light to turn, via amber, to green, you realize that the individual beside you in the block, also eyeing the lights, sits astride a camel and wears a long bright blue cotton gown or *galabieh*.



# Living Space for All

by PROFESSOR E G R TAYLOR, D Sc

IN less than a century and a half the population of the world has more than trebled. This is a startling fact and one that might well give rise to misgivings. Supposing such a rate of increase to persist, how could the vast multitudes be fed? For that ultimately is what living space means—not space in which to work and sleep and eat and play, but feeding space, crop space. To put the question more precisely, will there be sufficient agriculturally productive land for our myriad grandchildren and great-grandchildren, or will famine step in to apply the brake to reproduction?

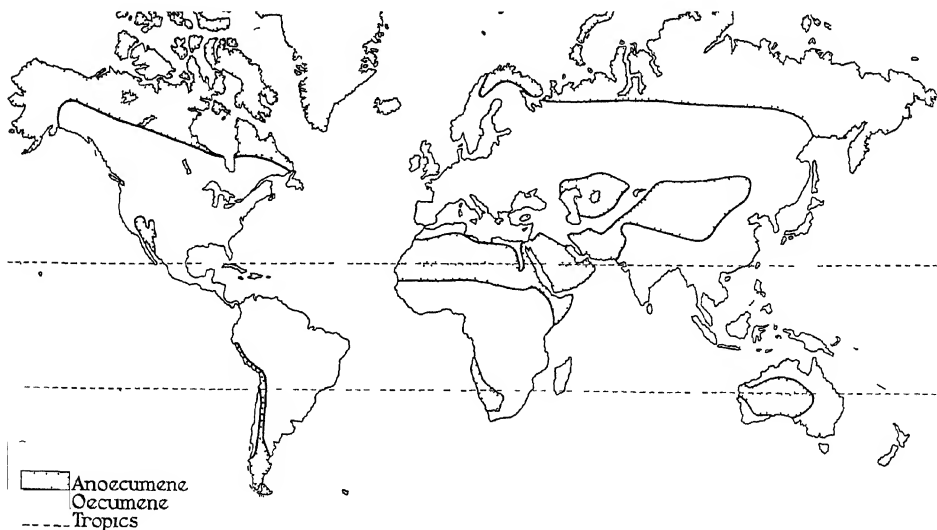
German geographers have declared this question to be the most pressing problem of human geography and have examined it with great care. Their estimates of the number of human souls who will 'fill' the world vary from 6000 to 8000 millions, even the latter well under a fourfold increase. Moreover, to find room for this increase they picture vast throngs dwelling in those tropical and sub-tropical spaces from which they believe themselves to have been wrongfully debarred. How are such calculations made? And what is their value?

The word 'space' itself has different meanings as used by different thinkers and

observers. In its grandest aspect Space implies the Universe, all but the minutest fraction of which we know only indirectly, through the researches of astronomers and mathematicians. Of much less size is the space we can actually explore, still not in our own persons, but by sending instruments up into the skies on unmanned balloons, or down into the ocean abysses on slender cables, or by driving boring apparatus deep into the earth. Next there is the space which can be reached by aeroplane, by submarine, by the mine-shaft—perhaps ten miles up and well under a mile down. But still this is not living space, which for humanity at large is the land surface of the earth upon which he erects his dwelling and from which he gathers his food, although the supplementary sea harvest should not be forgotten.

The area of the land surface is about fifty-five million square miles, or 34,200 million acres, but it is no matter of simple arithmetic to turn this into living space. What do we mean by *living*? Is it to be at a bare subsistence level, or do we presuppose that standard of nutrition, spelling radiant health and energy, which Sir John Orr has declared possible for humanity at large?

Oddly enough, it may take an enormously



*Oecumene is the old Greek name for 'living space'—represented in the map opposite by the unshaded areas (Right) Bright eyes and dimpled arms bear witness to good nutrition (Below) His plump stomach is belied by his skinny legs His mother knows nothing of vitamins or balanced diet*

*Paul Popper*



greater acreage to support a people living from hand to mouth with starvation always round the corner than to nourish the same numbers adequately. The primitive hunter and food-gatherer, the Australian Black-fellow, for instance, would starve if confined to the ten-acre plot which under irrigation is adequate for the modern scientific farmer. Our first forefathers had as living space only the moist tropics, but the discovery of fire and of clothing for warmth (instead of merely for dignity, for ornament, for coquetry) enlarged that living space at a bound almost to the Pole. Life in the Arctic called forth all man's latent skill, as witness the wonderful craftsmanship of the Eskimo, but despite its herds of reindeer, caribou and musk ox, as pictured by Stefansson in his *Friendly Arctic*, despite Russian food-growing marvels at Dudinka and Igarka, despite even the weekly ration of margarine which we owe to schools of Antarctic whales, neither the Far North nor the Far South can be 'living space' in the truest sense of the word. Living space must provide bread-stuffs, a provision that







*Black Sta*

(Above) *The almost naked hunter with his bow and arrows requires much more living space than an English or American farmer* (Below) *Intensive cultivation and irrigation means a large yield of food to the acre. In spite of the date palms in the background this scene is in the Great American Desert—Arizona*

the 'never-hot' parts of the world are unable to compass

From our fifty-five million square miles, therefore, we must deduct all those areas which, whether because they are too far from the Equator or because they are too elevated, have a mean summer temperature of less than 55° Fahrenheit, for this sets the approximate 'cold limit' to the ripening of wheat and barley. True, that such hardy food and fodder crops as oats, potatoes and hay will yield harvests in even cooler summers, but we are thinking in terms of 'good nutrition', and if we look at a map of the world's population today, we shall find that lands beyond the wheat limit are very sparsely settled indeed. It is worth remembering that the most intense winter cold does not deprive a region of its right to be termed 'living space' so long as there is, say, a five-months warm growing season for cereals. At Yakutsk in Siberia the mean temperature for the year is 18° below freezing point, but the July temperature is 67° Fahrenheit—much warmer than London.

To the 'cold limit' of living space we have also to add a 'dry limit'. It is fortunate that wheat, and even more decidedly barley, is not very exacting as regards rainfall—too much rather than too little moisture is the





danger Nevertheless, ten inches of rain annually is their minimum demand, and as where rainfall is low it is also likely to be very irregular, with several years' drought in succession, we cannot safely count any area with under ten inches of rain as part of the *oecumene* (to borrow the old Greek name for 'living space') Within the tropics, where evaporation is so much greater, the limit of successful crops is nearer fifteen inches of annual rain, and so very extensive areas must here be added to what some have termed the *anoecumene*, the non-living space

Wheat disappears as a cereal crop in tropical lands, to be replaced by maize, the millets and (where water is abundant) rice But none of these is so palatable or so nutritious as wheat, and none of these will make a loaf of bread It is deeply significant that civilization first began, 7000 years ago, in those localities which were unique in their capacity to produce bumper surpluses of wheat—Egypt, Mesopotamia and the Indus valley Rice was only a *pis-aller*, grown when the wheat farmers reached parts of China and

India which were unsuited to the nobler cereal

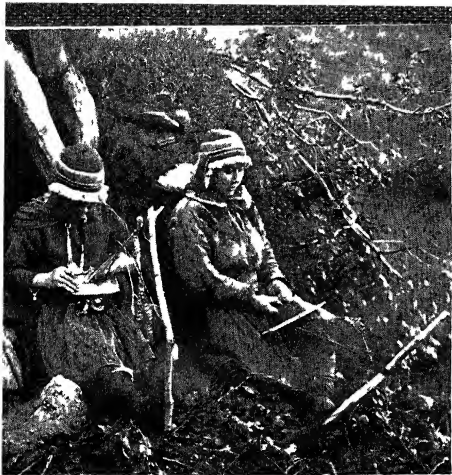
Nor should we omit to notice that wheat and wheat-flour are being increasingly imported into the tropics, notably in the West Indies and tropical South America It is difficult to say whether the torrid zone should rate equally with the temperate zone, acre for acre, as living space Scientists are now agreed that the so-called 'laziness' and apathy of many tropical peoples is traceable to dietary insufficiency and to chronic debilitating diseases, and startling developments might follow a dietetic and hygienic revolution in monsoon Asia

When we suggest that a cold summer limit and a low rainfall limit can be drawn between the *oecumene* and the *anoecumene*, we do not forget that communities are to be found that flourish in the latter But each one of these on examination is found to be exceptional In Spitzbergen, for example, a coal-mining town and seaport has been built within 900 miles of the Pole at a spot where darkness reigns for nearly four months and

*The stunted trees show how cold sets a limit to plant growth only a few reindeer herders find living space here, although Stefansson holds out 'rosy hopes of a Friendly Arctic'*

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Paul Popper



Paul Popper

*Far Northern peoples with great climate handicaps to overcome show skill in handicrafts. These Lapp girls (left) are weaving belts of reindeer sinew and strips of hide. Up in the high mountains (right) a few shepherds guard their flocks—but there is no living space here for mankind at large.*

the thermometer falls more than 70° F below freezing point every winter. In Western Australia, the mining towns of Coolgardie and Kalgoorlie (now sadly decayed) have their water piped from a distance of 380 miles, and all their food carried across the desert. In the Rocky Mountains, scientists man an observatory at 14,000 feet altitude, while La Paz, the highest city in the world, with 120,000 inhabitants, is at 12,000 feet, and there are Andean mining settlements some 5000 feet higher still. Metals, however, have always lured men into strange and even horrible places. Of greater import, because it is permanent rather than ephemeral, is the ribbon of green, affording living space for fourteen million people, which the Nile has unrolled across the desert. But the Nile valley must not be taken as typical of what the dry anoeumene can become. Irrigation can work wonders, but the water for irrigation has to be available first, and it cannot be conjured into existence.

In computing a possible world population of 8000 millions, the German geographer Penck has assumed that wherever improvement is possible, by irrigation, drainage, reclamation, forest clearing and so on, such improvement will be carried out, and hence he writes off only 4½ per cent of the globe (outside the Antarctic) as uninhabitable. Even if we add to his figure the 10 per cent deemed capable only of supplying extensive grazing grounds, which is at present occupied largely by nomads, this is a very optimistic outlook.

On the conservative side, and taking the world as it now is, Mr O. E. Baker, the American agricultural expert, writes off no less than 30 per cent as 'too dry', another 12 per cent as 'too cold', and as much as 37 per cent as uncultivable because of lack of drainage, mountainous character, jungle cover or other impediment. He calculates that a mere 11 per cent, say 3840 million acres, is under farms of one sort or another, but that another 2880 million acres might be brought into use, rather more than two-thirds as much again. This would provide for an extra 1400 million people, a figure which might well be reached in half a century if the increases of the last hundred years afford a true index.

In fact, however, the population curve, at least in the Western industrialized countries, appears to take the form shown in the diagram, with a double inflexion of great significance. A slow, steady increase is suddenly replaced by a rapid growth that can be explained in terms of the Industrial Revolution, the pioneer settlement of new and rich lands, the spread of new health and hygiene. Then comes a slackening of growth in favour of an almost 'steady state', associated with the end of the pioneering era, and with a generally high standard of living that has brought into being a new prudence, since golden opportunity no longer lurks round every corner.

But this doubly inflected curve is not a world curve. Soviet Russia, for example, where the masses before this war were enter-



Pictorial Press

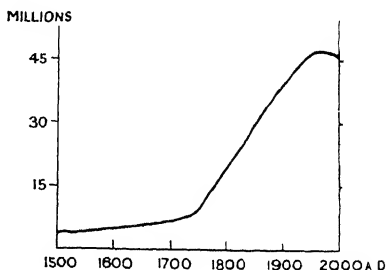


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Man can overcome Nature—at a price. Here (left) is a Soviet greenhouse in the Arctic, where artificial sunlight and artificial heat have contrived to ripen the tomatoes. (Right) The Libyan campaign has made such scenes familiar: the thirsty earth can support only the sparsest plant growth. (Below) The population curve in Western Europe showed a remarkable rise with the Industrial Revolution, but its present trend is hurtling at a decline.

ing joyfully into a new and vast inheritance, still shows a rapid increase, as also does India, although for very different reasons. Anxiety about living space, therefore, takes on a national aspect, and particularly so because the amazing population increases in the industrialized countries of the West had as its counterpart a growing inability to feed that population from the home farms. This was the case in our own country, although viewing as we did the overseas Dominions as living space it gave us no concern. It was also the case, although to a less degree, in Germany, it began to be the case in Japan, and there were clear signs of it in Italy, France, with her population long since in the 'steady state', had no such problem, and the United States with her vast land resources had nothing to fear. In times of peace, with freely developing world trade, the problem might be merely an academic one, but in times of war, economic war equally with military war, the situation was fraught with terrifying possibilities.

Thus the notion of *Lebensraum*, of living space, was bound up in German eyes with the notion of autarky, of self-sufficiency especially in foodstuffs, but also in the other fundamentals of existence. The situation was complicated by another world-wide trend, at least in industrialized countries, the flight from the land to the cities, so that there arose a cry, not only for more soil to feed the people, but for yet more people to till the soil. The attempt to solve both problems by the forcible seizure of neighbours' territories and the



enslavement of their peoples is what we are witnessing today. This clearly is no solution, nor shall we here attempt to offer one. But it is worth examining our figures again to see if they throw any light on the question: what should be Everyman's living space, and what proportion of a nation's workers should be settled on the land in a well-balanced economy?

If Mr O. E. Baker's figures are approximately correct, then mankind is sustained at his present average standard of living by the cultivation of rather less than two acres a head. This agrees with an estimate by the same writer that two and a half acres a head is required for the American standard of nutrition, scaling down to half, or even a quarter of an acre a head for the standard obtaining among the poorest peasants of the



Pictorial Press



Paul Popper

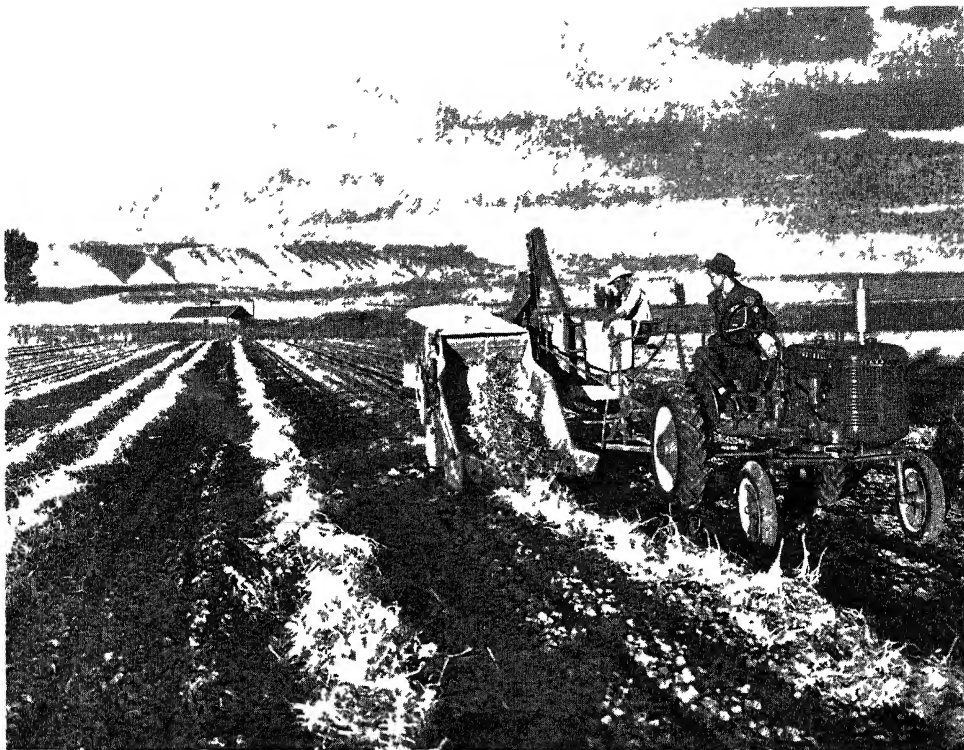
(Left) In Germany and elsewhere in Central Europe the peasant farmer and his wife with scythe and rake still gather in the harvest (Top) The Indian farmer must feed his bullocks as well as himself from his tiny holding If he, and millions like him, could exchange his ragged shirt for a whole one, Lancashire looms would be busy (Bottom) The standard of living is rising in many once-backward countries Treading out the corn is becoming an uncommon sight in Turkey

Far East This tallies very well with the German estimates of from three-quarters to two and a half acres according to living standard, and it is not without significance that Mr Baker remarks that nearly half an acre per head could be saved if mechanical power were substituted for the draught animals which must themselves be fed from the land

On some such numerical basis as this it can be calculated that Great Britain might have fed the equivalent of twelve to fifteen million people on her pre-war farm acreage, but as a considerable proportion of the land was not 'pulling its weight', we must reduce this figure to nine or ten millions, which agrees fairly well with the German estimate that we were importing four-fifths of our food In German eyes this meant that our islands were over-populated by no less than 450 per cent, that is to say, we had more than four times as many people as we could feed By improving our land and our farming methods, however, we were considered to be able to feed another

eight millions, leaving us still with more than half the population to be fed from overseas Similar calculations for their own country revealed Germany as 75 per cent over-populated, and able to relieve the situation by no more than 20 per cent if every possible improvement were effected Japan, Switzerland (with over a fifth of its territory ranking as anocumene), and the Low Countries were cited as over-populated, and as incapable of effecting any improvement whatsoever Only France among Western European countries was deemed to be under-populated in the sense under discussion

Without necessarily accepting these figures, we may next look at the second problem, that of man-power How many people besides himself can the average farmer or farm-worker feed? To this question, too, it is not easy to find an answer, in view of the wide range of technical equipment and living standards In Great Britain a million agricultural workers were on the land at the time when, as we suggest, the equivalent of food



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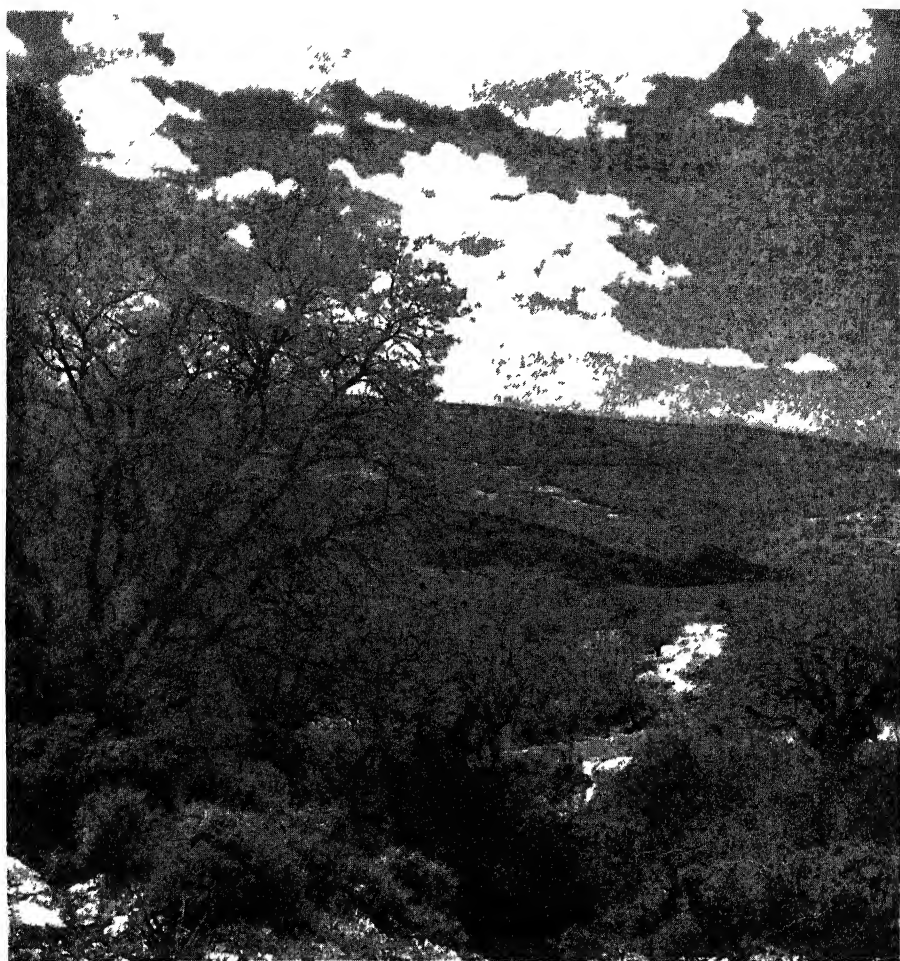
*Farming by machinery is not only efficient, it saves the keep of farm animals but nothing can equal farmyard manure for keeping the land in good heart*

for about nine or ten million people was being produced. In the United States, ten million men met the needs of 120 million fellow-citizens and could still send an eighth of their produce abroad, so that it would appear that they could have supplied 140 million people at home. At a conservative estimate, then, every farmer worker can supply ten or a dozen persons including himself.

The German farm figures, however, are less easy to interpret. In 1933, fourteen millions of Germans, the farmers, peasants and their families, were getting a livelihood from the land, and if, say, seven millions of these were actually working (for women and older children give help on the peasant holding), then each worker was only providing for five and a half individuals including himself. This lower figure is, however, to be expected where simple peasant agriculture largely of a subsistence type obtains, and when we turn to the millions of farmers on tiny holdings in

the East, it is clear that the surplus crop for sale must be small indeed. That the 110 million working farmers of India support 250 millions besides themselves, or just over three and a half persons per head, must be taken as a tribute to their unceasing toil and sacrifice. Since about 250 million acres are recorded as under cultivation, the estimate of about three-quarters of an acre a head for the Eastern farmer, which we have already cited, receives confirmation.

Figures may become tiresome and unreal, but we can review the matter very briefly in another fashion. Suppose all farmers were efficient, all land in good heart, all farming highly mechanized, so that everywhere one man might feed twelve from twenty-four acres? How would the world go then? Need we fight for living space? Or try to force or bribe men back to the land? Of all persons gainfully employed, only one in five would need to go on the land, and surely one in five will be found to go for love!



# Cyprus Discovered

by LAURIE LEE

"CYPRUS belongs to (a) Turkey, (b) Britain, (c) France?"

This question appeared in a recent Sunday newspaper 'quiz'. It was a topical question relating to Mr Churchill's visit, it was also, at the same time, a sorry reminder of our widespread ignorance on the subject.

I have been to Cyprus, but before I went there I shared that ignorance. Cyprus was

nothing to me but a name, it had no shape in my mind, its people had no faces or characteristics, they were as vague and unpredictable as men from the moon.

On arrival there, however, in the winter of 1938, I discovered that name to be a beautiful island, an island peopled with human beings who were, in fact, members of the British Commonwealth of Nations. This



was a surprise, and yet they seemed to know as little about me as I did about them. Their island seemed poor, neglected, undeveloped and forgotten. Perhaps that was part of its charm, it was at the same time a sign of our own shortcomings.

When I left Europe I left a continent spoiling for war. I sailed from Greece in a dirty 500-ton steamer packed with Jewish refugees bound for Palestine. As we passed through the crimson waters of the Ionian Sea, the Italian island of Rhodes drifted by on the evening horizon, blue, metallic, secret, like a malignant fortress, the skies above her buzzing with bombing planes.

But the following morning we entered a different world, the still, classic world of the Eastern Mediterranean lit by a pink mythological sun.

My first awareness of the approaching island was a sweet scent of resin on the air. A scent like a strange tune, full of vague recollections and inexplicable nostalgia. Then a cloud grew out of the cold clear sky, and the cloud filled the horizon and began to pour rain upon misty hills. All day we followed those hills. We saw bare rocks and dark groves of trees and mountains disappearing into the storm. But we saw no life nor any houses, the island seemed big, it seemed fertile, but it also seemed forsaken.

Towards evening we approached Limassol, one of the southern ports. Limassol has no harbour and her waters are shallow. We anchored about a mile outside, we were taken off by small bucking boats and landed upon a wooden jetty in streaming rain. In such weather the town seemed both strange and familiar. English cigarette cartons littered the sodden streets, and something like English policemen stood round about, but their hats had broad brims and they spoke in Greek.

With four assorted people—a Jewish farmer, a Greek student, an Egyptian engineer and a young Cypriot—I shared a taxi to Nicosia. Except for grins and gestures we had no very effective common language. The roads were yellow lakes of rain, and we drove at top speed right into the heart of the island, night falling swiftly and our klaxon playing a non-stop fanfare through the blue unused country. The mountains of Troodos, on our left, burned

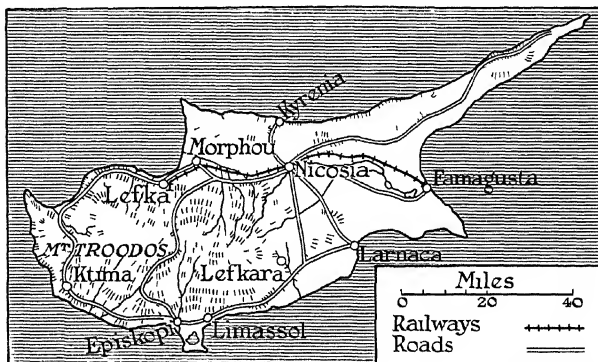
for a brief spell before night covered them. And Nicosia, which must have heard us a league away, was lit like a birthday cake when we arrived.

The young Cypriot, Christo, had been away a long time, as we drove down the hill into the town he grew excited, tugging my arm and waving to invisible landmarks. "First we pass the Armenian Academy," he shouted, "then the place where they put the fools, then the Greek Gymnasia, then the field for dead men." This, then, was the capital of Cyprus.

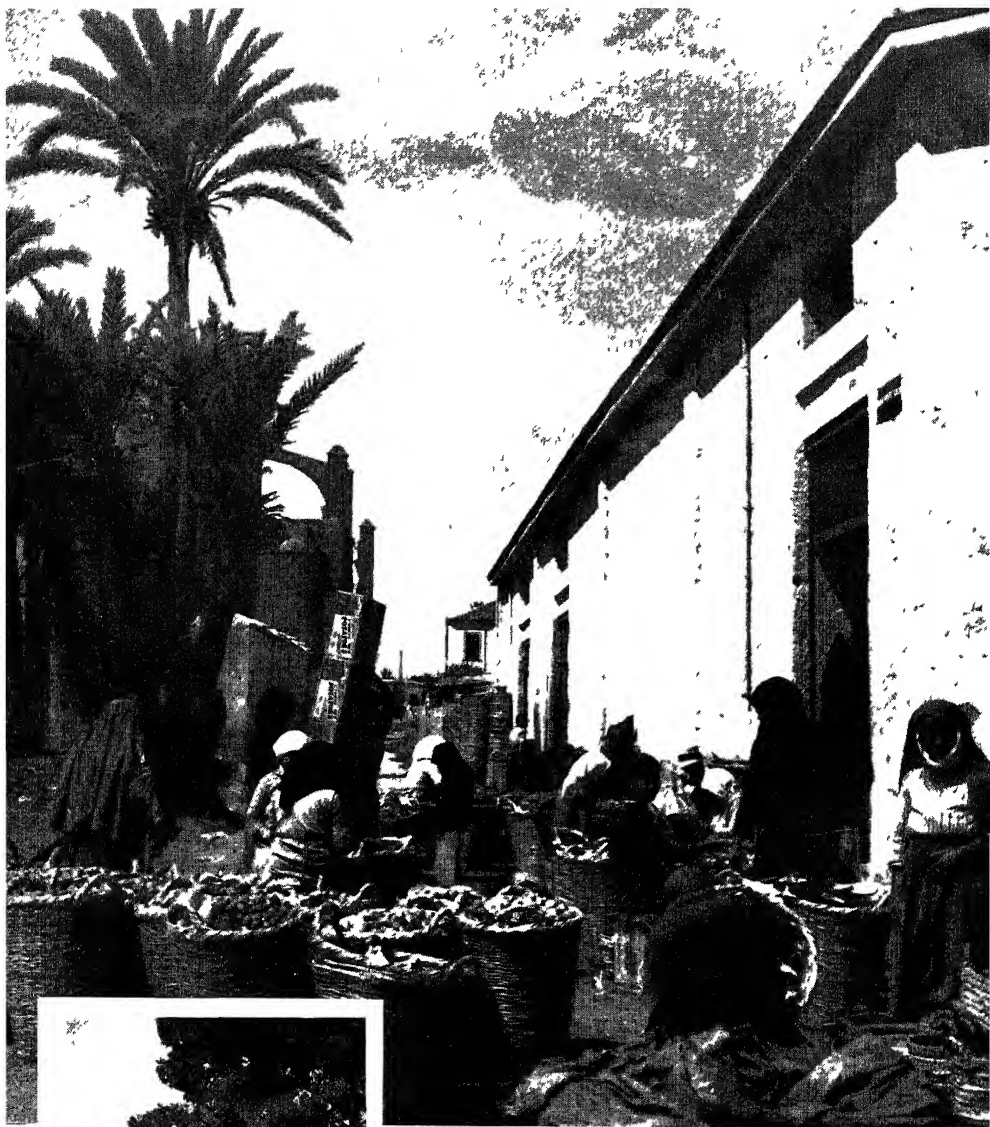
The town was full of trees, children, goats and flowers rambled over the ancient Venetian bastions, and the houses, slight and unsubstantial-looking, were covered with waving leaves. But among the people I found a most extraordinary *bonhomie*. I was there five days and got no sleep. With Christo as my introduction I soon knew every member of his generation. We spent nights and days eating sweet cakes in the cafés, electric horns in the streets never ceased their clamour for a moment, the whole place roared like a fair, and we had to go out into the fields to hear ourselves sing. Actually I was told there was a by-law against singing either in the streets or in the cafés. But no other noise was barred or neglected.

But Nicosia was too hot, too wet, too orgiastic and too exhausting. I longed for the legendary Famagusta, whose name suggested an oasis of green cypresses and called seductively from the east coast. So I took my leave, my pockets stuffed with cryptic notes, written in Greek, from my new friends commanding newer friends to receive me.

The only railway in Cyprus runs the sixty-odd miles from Nicosia to Famagusta. It is a small-gauge, miniature affair, with wooden trucks constructed as an apparent compromise between human beings and such



Stanford London



*Christmas was the main harvest time in Cyprus—the time of the orange harvest. Day and night, from the packing stations near the docks, one could hear the chatter of women and girls, grading and wrapping the golden fruit freshly gathered from the coastal gardens. There were other harvests too at other times, notably that of the new potatoes which, when packed, were loaded into small, brightly painted sailing boats and sent off to Egypt. (Above) Turkish women packing new potatoes at Famagusta. (Below) The main gate at Famagusta.*

other livestock as they may wish to take with them. There is little room to relax, and in a crowded compartment the knees of the opposite passenger dovetail into your own. The journey took a long time and passed through a red, yellow and green country, flat, some of it only lightly scratched for cultivation, some showing vineyards and olive trees growing in steel-blue rows. On the northern horizon a range of arid, orange mountains gleamed unbroken in the slanting sun. Approaching Famagusta, hidden in the dusk, I had no idea what to expect.

I found Famagusta a splendid, dusty, war-scarred, terrible city. Its name, I am told, comes from the earlier Greek *Ammochostos*, meaning "hidden in the sand". Its sands are broad and blinding, even in winter, and the city, which is built half on rock and half on sand, sticks out into the sea with high unbroken walls surrounding it, golden as from centuries of sun. It was once one of the richest cities in the world, in the 13th century, under the Lusignan kings, it became the foremost mart of the Mediterranean, flowing with gold and jewels and all the treasures of that world. Its walls were some of the finest ever built, high with broad alleys round them, and covered with magnificent towers. Its walls remain, but the city is now but the graveyard of its former glory, full of the brown shells of Venetian palaces, of villas, churches, citadels, and the cathedral, broken by the cannon balls of the Turkish assault which captured the island in 1571.

And Turks live there today, orthodox Moslems, descendants of those conquerors, now quiet and conservative, reflecting very little of the revolutionary spirit of Modern Turkey though coloured portraits of Kemal Atatürk hang in every cafe.

There was a quality about this place which remained still terrifyingly medieval, the city walls were so thick and prison-like, the scarred churches were like wounds that would not heal, and the people, garbed in traditional rags, whipping their camels or dozing under the mosque, appeared to be enclosed by a past that would not let them go. They seemed mute, too, as if their tongues had been torn out.

But outside the walls, in the Greek quarter of Varosha, I found a different feeling, though one no less frightening. Here was a community of modern Greeks, full of intelligent curiosity, avid for information about the world they lived in, yet seemingly starved of it.

This, then, was the human make-up of Famagusta, and more or less typical of the

whole island—mostly Greeks, a fair number of Turks, and a minority of Syrians, Armenians, Egyptians and Arabs. They lived together peaceably, with very little national prejudice of any sort.

These people had a considerable gaiety. Though they were poor, and though the young had but one thought—to escape to the modern world—yet they had a terrific talent and respect for enjoyment. They enjoyed themselves simply and in all the most obviously direct and unsophisticated ways, dancing, music, singing, gambling, gossip and the enthusiastic observance of festivals. There was a complete lack of urgency in everything they did, but when they decided to do a thing it was never cold-hearted. Their normal everyday commercial transactions were marked by an almost traditional exchange of civilities. When I went to a small tailor to order a pair of trousers, the first thing he did was to send out for a cup of thick Turkish coffee. And I had to sit down and drink it, and I had to talk. The master and his men sat round on the floor joking and telling stories and pulling one another's leg. Presently more coffee was sent for, it was like a party. This may not be the way to conduct business but it is a way to live. The trousers, when made, cost five shillings and sixpence. This included both material and labour, and they were excellently done. At such a price one can judge the rates of pay common in the island, not even skilled craftsmen earned much more than half a crown a day.

This tailor, who was a young Greek, became a great friend of mine. He asked me to his house for Christmas dinner, and that day is one I shall always remember. After bathing in the thick green sea I was given a special breakfast treat in my Syrian hotel, two pale-yoked eggs fried in oil. Then I went with the tailor and several of his acquaintances to visit Poli's fruit farm. Poli was a queer brown little farmer famed for a remarkable breed of oranges. He was very proud of them, he was always asking, "When are you coming to mine garden?" Today was the day, so first we went to his house, bowed to his wife, and drank wine and ate chunks of sweet ginger. Then we walked up and down the rows of orange, grapefruit and citrus trees, groaning now with the full weight of their harvest. Never have I seen such fruit! The oranges were like great lanterns bending the branches, and had an intoxicating flavour, like muscatel. They had thick oily skins and were often as much as nine inches across. Their size, I was told, made them uneconomical to export. The grapefruit, sold in the local market at



twopence a dozen, were almost as large, and a most luscious breed, sweet as honey and tender as the breast of chicken. To me, who had been used only to the tart, tough-skinned variety sold in England, they were a delicious revelation.

Besides these Poli grew pomegranates, peaches, plums, pears, tangerines, and smaller oranges for export. But this export market was never a very sure or well-organized affair, and, since the war, has practically broken down altogether. In fact, about a year ago, I received a desperate letter from Poli asking had I any suggestions as to what he could do with his rotting harvest?

The tailor's house, to which I went for

dinner, was a simple one-story building of brown porous stone. The verandah was brilliant with geraniums, growing from painted petrol tins. The road outside was an ill-kept desolation of stones and deep gulleys carved by the torrential winter rain.

The interior of the house presented a strange conglomerate atmosphere, an overlapping of east and west. There were lovely pieces of local baked pottery mixed up with some hideous imported English vases. And on the walls I saw a Syrian plaque of exotically painted wood, a picture of Marion Davies, a metal cigarette advertisement, and a print of Stephenson's *Rocket*.

The tailor's wife, after presenting her



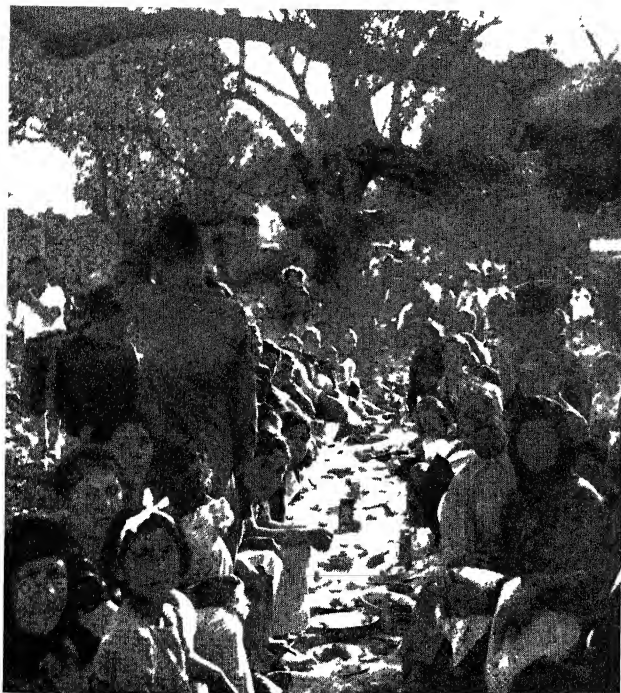
*Cyprus is an island of craftsmen, peasant farmers and fishermen. Their way of life is Mediterranean and reflects modern European methods hardly at all. There are no big industries, no factories, nothing but that hard individual, careless struggle for existence which has remained unchanged for centuries. A common sight in the village street is the black-robed priest of the Orthodox Church, a being whose patriarchal presence is like an echo of the past when seen against that biblical landscape. And characteristic of that landscape is the peasant family agriculture still largely primitive in technique, where the women till, sow and reap and look after the domestic animals, and the men devote their lives to the science of bargaining. During spring and summer the sun is very hot and it is quite usual to find the agricultural labourers at midday sleeping under the trees on which they hang their baskets. Around the shallow coastline, which abounds in fish, the fishermen follow their happy-go-lucky trade, netting sufficient for the day, but seldom more.*



daughter, a dark child of two with heavily kohled eyes, served up the meal and then retired discreetly to another room, leaving us alone. My friend, who spoke no English, had invited a travelled carpenter to act as interpreter. Our conversation, as we ate our Christmas meal, was an urgent catechism on the one hand, and a struggle for explanation on the other. The tailor was concerned about England and the turmoil of Europe, about which he knew so little. We ate a spicy succession of dishes: rice soup flavoured with cinnamon, pickled cabbage with boiled chicken, roast chicken with artichokes, and an abundance of sweet cakes washed down with Kommandaria. But throughout that

lavish meal I was more aware of my host's real hunger, a hunger for news.

In the new year I attended his cousin's wedding, and a wedding is a big thing in a Cypriot's life, it is a climax in more ways than one, often it is something from which he never recovers. For a wedding is generally a holiday for the whole district, it is a huge feast and everyone takes part. But this means the provision of vast quantities of food and wine, and pride allows no skimping. Unfortunately the betrothed have often to borrow heavily to provide this, and although the reflected glory of their nuptial banquet may remain with them for many years, the debt remains also.



*Feasts and festivals are occasions when the Cypriot really comes into his own, when he is best able to express his natural love of revelry, to let himself go and indulge his personality which seems never so exuberant as when sharing some common enjoyment with his fellows. The Cypriot year is a string of festivals, some religious, some pagan (like the Orange Festival), but all an excuse for feasting, dancing and song. (Left) An Orthodox Church festival, which the priests, who mix freely with the people, enjoy as much as anyone. The photographer, too, was welcomed and made to join the party. (Opposite) A village wedding in which everyone takes part: the young couple is fêted by the whole population and launched into marriage with an orgy of feasting.*

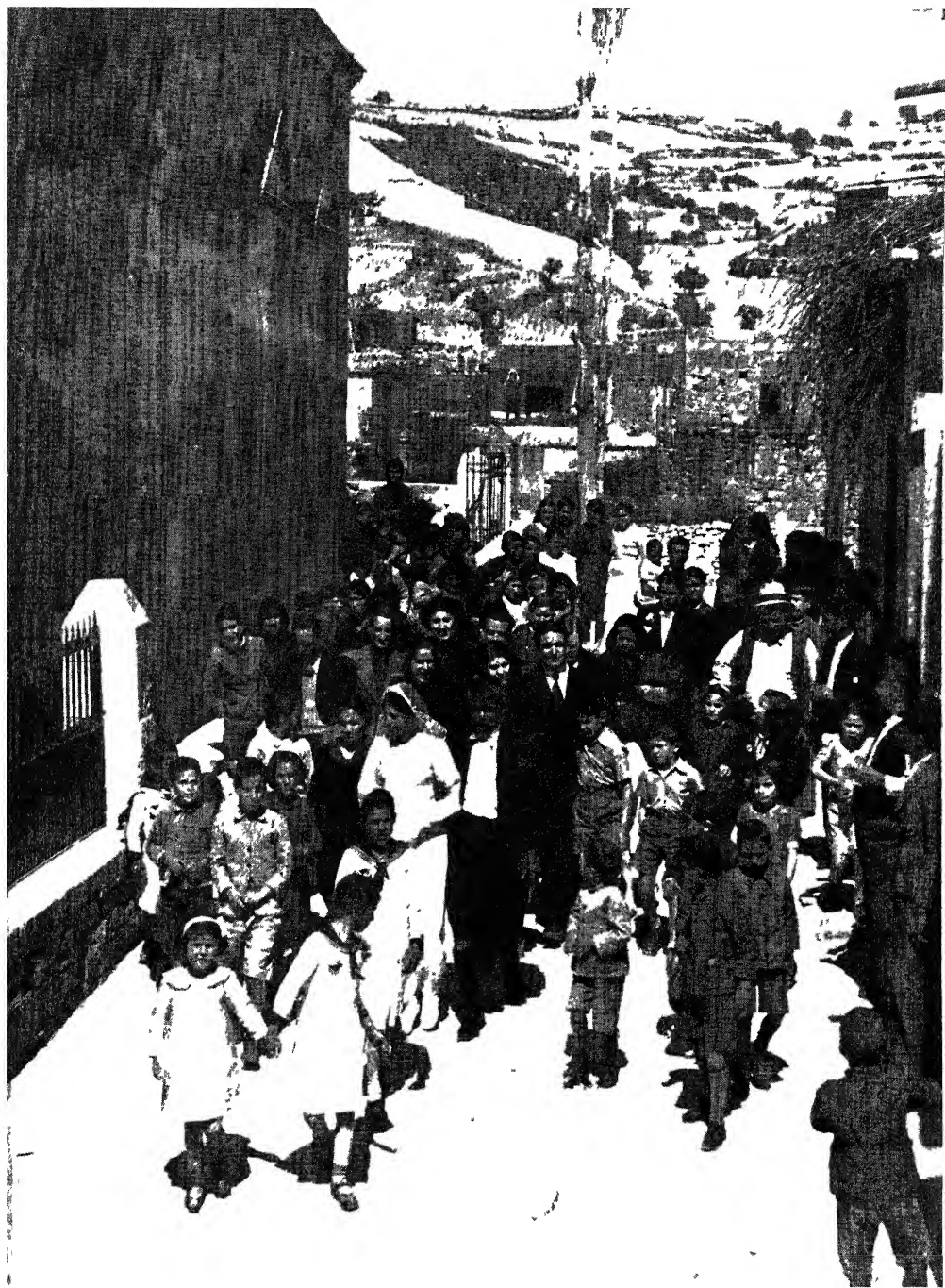
During my short stay in the island I had many opportunities of observing the Cypriot's volcanic vitality in matters of communal tradition, his love of colour, poetry, music, dancing, feasting, gambling and playing the fool.

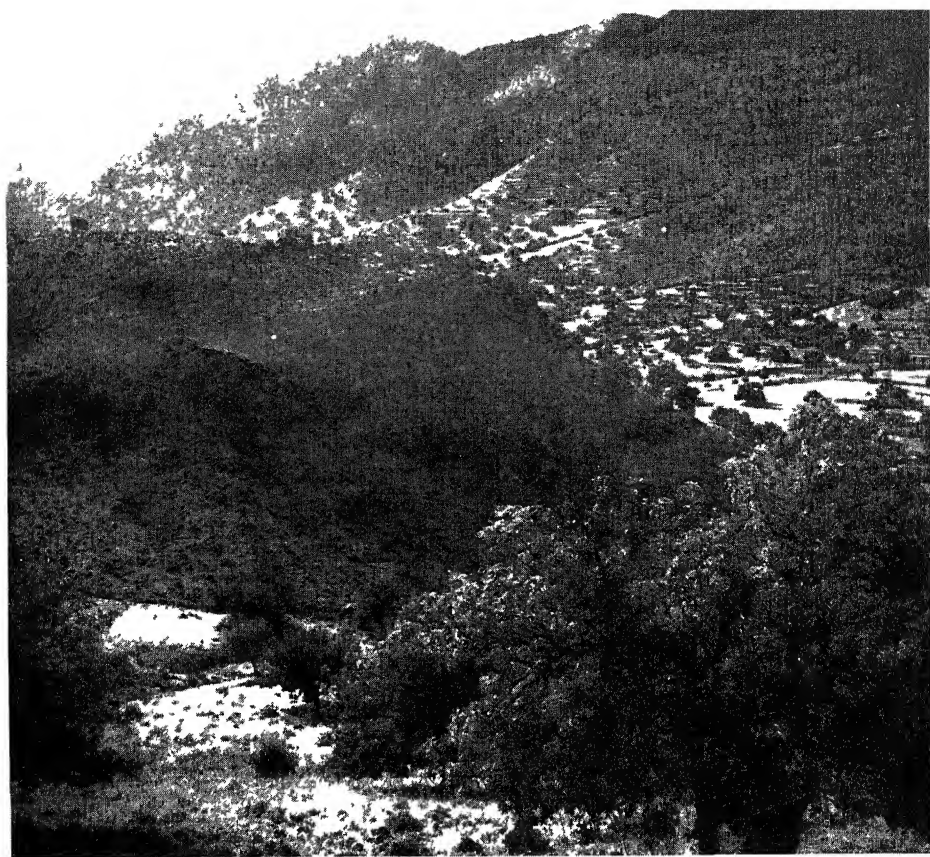
Fighting was common too, but it was as brief as a Chinese cracker. Music was a living thing, nearly everyone who possessed an instrument seemed to play it superlatively well, and those who could not, sang. I remember attending a concert in a small village ten miles out of Famagusta. An orchestra of flutes, pipes, mandolines and fiddles, played by old men, children, youths and girls, performed Greek and Turkish tunes in a way which left me breathless with admiration. Towards the end of the evening a young student got up and recited Flecker's *The Old Ships*, a poem which mentions Cyprus. He spoke it in clipped, musical English, and though I imagine that very few in the room understood that language, yet they listened with wrapt attention, and when he came to the word 'Famagusta', they all fluttered and nodded and smiled at one another. The concert consisted of nothing but music and poetry, and it was a howling success. The

air was full of choking dust stamped from the floor by appreciative feet.

Cyprus, the island, has been discovered to us at last, the Prime Minister's visit has done that. When I recall my own visit I think of these things. The wooded mountains of Troodos, a paradise of cool uplands seen from the baking plain. The green gardens of Famagusta with their forest of rattling windmills. The strings of brown camels *en route* for Kyrenia, and the priestly greeting of the camel-driver meeting you on that road. The red finger of the Kyrenian mountains pointing out through the blue sea towards Syria. The white ruins of ancient Salamis smothered with lizards and wild anemones. The quick bare feet of the potter, turning his wheel, and the movements of his black wet hands, moulding the clay. The lazy afternoons strung out under the Turkish mosque, drinking black coffee and playing dominoes. The abundance and richness of the fruit which never seemed to have a market. The extreme beauty of the young girls—Greek, Syrian and Turkish. The tragic







*View from Halarion, near Kyrenia Half the island of Cyprus is a baking plain, but the rest consists of wooded, terraced hills, a cool paradise in summer, where most of the best grapes and olives are grown*

ughness of the young wives, slaving and cracking like clay under the hot sun The music of the goats leaping round the golden walls of Famagusta The wild dogs of the country farms snapping like wolves, and the naked children who ran out and asked you for the moon The lights of the fishing boats on the blue night sea The noise in the narrow streets, the shouting, the fighting, the bicycles, camels, roller-skates, cattle, poultry and electric motor-horns The poor fields, the search for water, and when it rained the abundance of water running to waste The girls' dancing at the Orange Festival, twisting their handkerchiefs, radiant in their long lace

dressess The warmth of the people, their friendliness, frustration, curiosity, their mania to escape The biblical landscape with its olives, cypresses, palms and eucalyptus trees The beauty of the island like a mirage shimmering to heaven in a haze of heat The claustrophobia of the island like a lovely prison, the air so bright you could see for a hundred miles the distant coast which bound you like a chain

This same claustrophobia seemed to dominate the young Cypriot even in his gayest moments He loved his island but could not escape it He felt lost, ignored, uncounted in the scheme of things His whole life



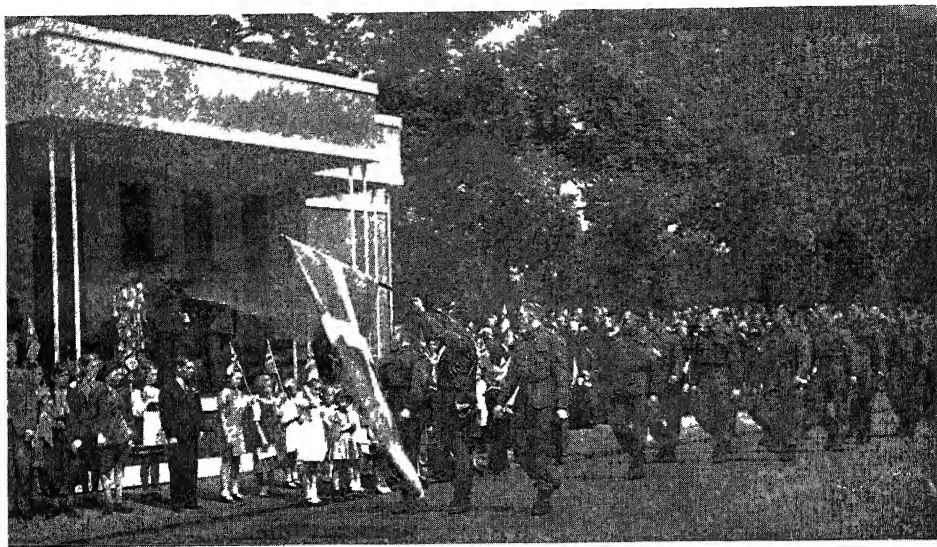
*Photographs by Nancy Jenkins*

*The eastern plain of Mesaoria, which produces wheat, potatoes and fruit, is a land with little water. Blindfold mules walk patiently all day, hauling up buckets on a wheel to keep the fruit farms green.*

was overshadowed by this and by a deep nostalgia for the mainland. He was worried by rumours of European conflict about which he had few real facts, though he knew, in the end, it would be bound to affect him.

Now war has shown him to be a fierce and valiant soldier, and his island one of extreme importance to the Democracies and to the strategy of their coming offensive. He has joined the battle with us, at last we know him and can see him. When peace comes, let us make sure that he is never again exiled, or forgotten, by the community of peoples to which he belongs.





# Free Danes

by JOHN C STREET

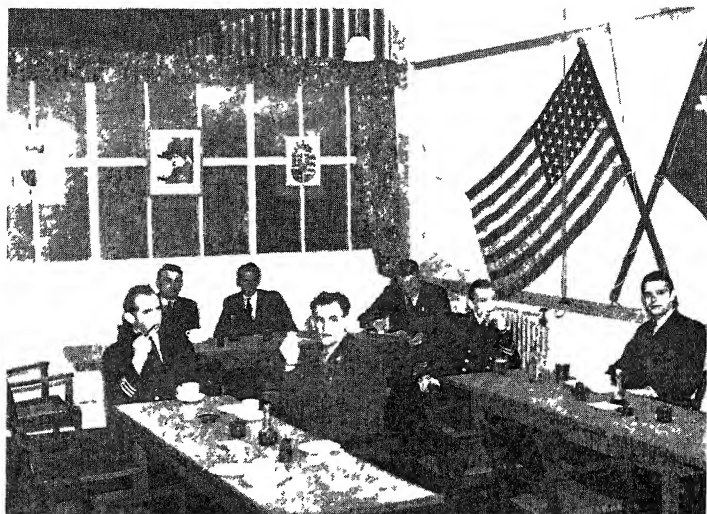
It is tempting in time of war to see everything in terms of black and white, we have accustomed ourselves to dividing the small countries of Europe (neutrals apart) into the occupied countries on the one hand, with their allied governments in London, and the enemy puppet states on the other. Such a division takes no account of one country which, to its misfortune, enjoys a peculiarly anomalous position — Denmark. Britain regards Denmark as an occupied country but not as an ally, and she is not of course a member of the United Nations. Germany affects to regard her as unoccupied, and the Danish King and Government are compelled to lend themselves to the fiction that in return for German protection they have been allowed to retain their independence and internal autonomy.

To the Danish people this presents a difficult problem. Heart and soul with the Allies, yet almost powerless to help in their tiny disarmed country, loyalty to King Christian bids them rally round his policy of honouring the terms imposed on the country by force on April 9, 1940, while doing their best to prevent the Germans from going beyond them. In their own country the Danes are not only bound with German bonds but

muzzled, partly, with a self-imposed gag.

To judge their true inclinations, however, one has only to look at those Danes who live outside their house of bondage. They are restrained neither by concrete shackles nor by abstract inhibitions. Few in number, they have tried to demonstrate by their unity their determination to free their country and to earn for it an honoured place in the post-war world.

Chief among them are the merchant seamen whom that 9th of April found in every quarter of the globe sailing the seven seas as they have done for centuries. On that day, as the German hordes poured into Denmark, two appeals went out over the air. One from the Danish Government, issued under duress, called upon Danish ships to take refuge in a German or neutral port. Another, from London, urged them to put into an Allied harbour, to carry on from there the struggle against those who had violated their country's thousand-year-old independence. One Danish skipper, bound for Malaga, made the best of both worlds by continuing his journey, knowing full well that his course would take him into the contraband control port of Gibraltar on the way. Altogether, between three and four thousand seamen with



(Above, right) Danish merchant seamen have their own club in a British port (Left) Henrik Bjerregaard, whose story is told in this article His is one of the few Danish exploits that can yet be chronicled (Opposite) Free Danes are serving in every branch of our war effort Their volunteers in the Buffs saluting King Haakon of Norway, brother of their own King Christian X, on his seventieth birthday

half a million tons of shipping (just the tonnage which carried the Anglo-American invasion force to North Africa two and a half years later) rallied to the Allied cause and sailed henceforth under the British flag When the United States came into the war the number was swelled by a further fifteen hundred They have, of course, suffered casualties proportionate to their numbers

Dangerous as are the grey waters of the Atlantic, where the submarine packs lie in wait for the slow-moving convoys, Danish ships manned by Danish crews have taken part in even more perilous exploits, from Crete to Murmansk, from the Lofotens to North Africa For security reasons, and to prevent reprisals against their families at home, their names, their exploits and their experiences can seldom be printed Not long ago, Francis Hackett retold in the English edition of *Free Denmark* the odyssey of First Mate Henrik Bjerregaard who, with five companions of whom three died, drifted for nineteen days in the North Atlantic on a raft nine feet by twelve Bjerregaard did bicycling exercises to keep up his circulation, warmed his companions' frozen feet in his armpits, and finally climbed unaided aboard the rescue ship, with his 'diary', a notched stick on which he had kept a tally of the passing days

and of the deaths of his comrades

In the North British port where I live, they now have their central 'pool' At any given moment there may be scores or even hundreds of them there They have their own club and their own professional organizations I find them men of few words, just as I knew them in peace-time in British ports or on the coasts of Jutland and Zeeland, going about their work in their usual dogged and unassuming way, looking forward only to the day when once again they can set their course *Skagen Ind*, "round the Skaw", and come to anchor in a free and independent Denmark Till then, and apart from the separation from their families, they seem to have only two regrets one that owing to the value which the Minister of War Transport places on their services to the merchant navy it has not been found possible to grant their desire to provide the crew for a warship, the other, that as they are not technically allies, they have to sail under the British flag instead of under their own scarlet and white *Dannebrog*

The seamen have, throughout, given their whole attention to their job But it was not long before other Danes over here, business men, journalists and so on, felt the need for some organization which would stimulate,



centralize and coordinate their contribution to the British war effort, on which the liberation of their country depended. In September 1940, with the approval of the British Government, a Danish Council was formed by representative Danes of all classes with the motto "With Britain for Denmark's Freedom". Reversing the usual procedure, an "Association of Free Danes in Great Britain and Northern Ireland" was then formed round the Council, which submitted itself for re-election as the Association's executive instrument, thus placing itself on a sound democratic basis.

Danes now began to be admitted to the British services. In the army they form a special detachment of The Buffs of which King Christian is Honorary Colonel-in-Chief. In the R A F the nucleus of a Danish Fighter Squadron was formed in April 1942, when Mr Churchill in person accepted from representatives of the Council a cheque for over £38,000, the proceeds of a Free Danish Spitfire Fund. Many Danes entered the women's services and Civil Defence.

A small community of which little is heard is that of the Danish fishermen who, with their own cutters, ply their craft from a British fishing harbour. Some of them were over here when their country was overrun. Others have joined us since, like the thin stream of people in all walks of life who, notwithstanding physical difficulties far greater than in Norway, have made their way across the North Sea.

In 1942 two events strengthened the Free Danish movement. In March the Danish Minister, Count Reventlow, who repudiated the Danish Government after it allowed itself to be coerced by the Germans into signature of the Anti-Comintern Pact, became Honorary President of the Association. Not long afterwards, Mr Christmas Møller, the Leader of the Danish Conservatives, escaped from Denmark where, owing to his patriotic activities, the Germans had forced him successively out of the Cabinet and the Parliament and banned all reference to him in the press. In August he became Chairman of the Council and the effective leader of the movement. When news of his escape reached Denmark, in May 1942, Danes went about greeting each other (in English) with the highly unseasonable greeting of "Happy Christmas!"

Throughout the British Empire and other parts of the free world similar committees and associations have been formed, such as the National America-Denmark Association in the United States, with which about 400

Danish-American organizations are affiliated. Well over 100,000 people in America were born and bred in Denmark, foremost among them William Knudsen, and though most of them are American citizens they have not forgotten their mother country in her hour of trial. The movement, however, has no final central authority. In America the outstanding figure is the Danish Minister, M de Kauffmann, who refused to take further orders from the Danish Government on their acceptance of the German invasion, and a year later concluded with the American Government a temporary agreement by which the latter took Greenland under its protection until the end of the war.

In spite of its many and real services to the cause, the Free Danish movement would lack any real significance if it did not correspond to the sentiments of the overwhelming majority of the Danes at home, and no account of it would be complete without mention of those who, though physically in restraint, contrive to demonstrate that they are free in spirit. From the first, even through the darkest days of 1940, they cold-shouldered and boycotted the Germans in spite of the care taken by the latter to refrain from the outrages which they had committed in other countries where resistance was armed and open. A movement of national resurgence and passive resistance set in and has grown steadily ever since. The daily ride through Copenhagen, unarmed and unescorted, of His Majesty King Christian X, resumed on the very day after the invasion, has now become the symbol of defiance and the rallying point of national feeling. Sabotage, illegal organizations, chain letters, underground press, all the familiar ingredients of resistance in occupied countries, are present in Denmark, although the peculiar political conditions have prevented the situation from becoming as strained as in other occupied areas.

In all these countries the story of the subterranean struggle can only be told after the war. But with their ingenious humour the Danes have invented milder forms of annoying the Germans and expressing their true feelings. One day a bookshop filled its window with copies of a book called *English in Thirty Lessons* with a big advertisement running "Learn English before the English Come". This was too much for the Germans, who had it removed. Next day it was replaced by a display of a German language method, and the advertisement was altered to read "Learn German before our German Guests Leave Us".





*The Free Danish movement abroad corresponds to the passive resistance and national resurgence in Denmark itself. This centres round King Christian X, whose daily ride through Copenhagen among his people has become a symbol and a rallying point.*

The press has become so skilful at writing for those trained to read between the lines that people say, in fun, the lines have to be printed further apart nowadays. The classical instance dates from the bombing by the R A F of German objectives at a town in Jutland. The newspapers were allowed to report only that bombs had been dropped and a cow killed, but one paper was suspended for a fortnight for adding that "the cow burned for three days before it was put out." If such things may not weigh heavily in the scales of the war effort, the Danes know very well that, as our Prime Minister told them last October, their turn will come, and it is safe to assume that for three years now they have been quietly making their preparations, confident that in the Free Danes they have ambassadors to present their case to the Free World.

In this country, tribute has been paid to them as to other victims of Nazi tyranny and

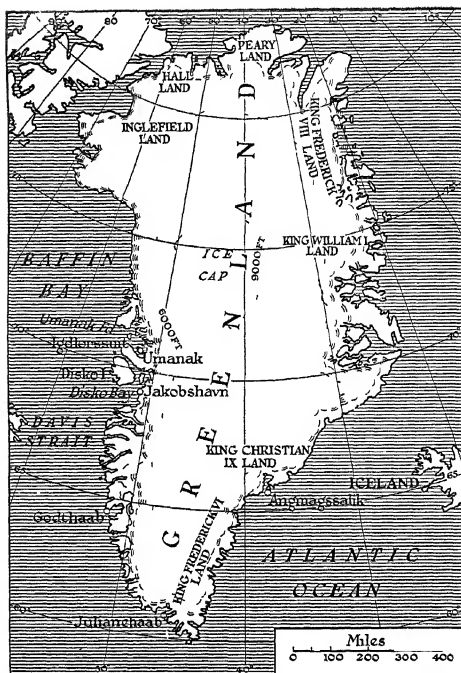
oppression who are contributing their share of "blood and tears, toil and sweat" by which alone the struggle can be won. Their organ, the well-edited weekly *Frnt Danmark*, proudly translates into Danish such words as those Sir Arthur Salter spoke in February 1941: "Denmark is not an ally in name, but thanks to the assistance you are rendering, you stand on exactly the same footing as the Allies, and I cannot emphasize strongly enough the help you are giving." In conclusion, I may quote the tribute paid to them on November 6 last at the opening of a Danish Merchant Navy Club in the northern port from which I write: "Free Denmark is not 'formally an ally', its spokesmen are not sitting at the Council table, but its sailors are fighting on the seas. Of the two, the second is the more important. To us, Danish officers and seamen are in everything but name the real allies of their friends in the other free Merchant Navies which support our cause."

# In Greenland's Flowery Valleys

by ISOBEL W HUTCHISON

*Greenland has been so closely associated in the popular mind with icy mountains (as a result of Bishop Heber's famous hymn which first appeared in 1811 in the Christian Observer) that its interest as a field for botanists is often unrecognized. But the island's first colonizer, the Norwegian Erik the Red (AD 982), called it Greenland in order to attract people to follow him there. Miss Hutchison's account of the island is based on her experiences on the west coast while seeking specimens of flower seeds for the British Museum and the Royal Herbarium at Kew.*

In the summer of 1935 I found myself, by the kind invitation of the Greenland Directorate, for the third time a householder on the world's largest island. This was not just a simple matter of buying a ticket and engaging a berth on the next available steamer for two hundred years Greenland has been one of the world's few 'closed shores', Denmark having the monopoly of all trade with her island colony, and those who visited it had to have special business there. This was a wise precaution. The 17,000 native inhabitants, who style themselves Greenlanders, are a simple friendly people and premature contact with civilization might well prove as disastrous to them as it has to primitive communities elsewhere. Danish rule was founded on mutual goodwill and sympathy. It dates from the days of the famous missionary Hans Egede and his wife Gertrud Rask, who landed at Godthaab in southwest Greenland in 1721 and established there the Lutheran Church, which has still no rival in this happy valley of a single faith. One may therefore hope that the end of the war will see Denmark's sovereignty over the whole of Greenland, which was ratified at the Hague in 1933, happily restored. At present the country enjoys the protection of



Stanford London

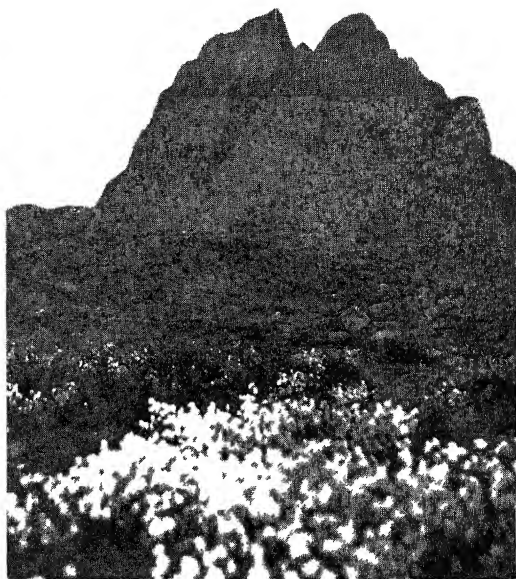
the United States, whose assistance was called in a year after the German occupation of Denmark.

At that time the Germans had tried to land expeditions in eastern Greenland—the most remote and icebound side of the country. By an agreement concluded between Mr Kauffmann, the Danish Ambassador at Washington (acting of necessity on his own initiative), the American Government obtained the right to "construct and use for the duration of the war air and naval bases in Greenland and in return to guarantee Danish sovereignty over the island." American aid was essential from an economic as well as military standpoint, as all Greenland's supplies had come from Denmark.

On April 9, 1940, when the German troops slunk into Copenhagen concealed in the holds of trading ships, outside communication with Greenland ceased automatically. To feed the population and to find new markets for Greenland produce suddenly became an urgent necessity. These markets were best obtained in America, at that time a non-belligerent. It is poetically just that America should come to Greenland's aid at this crisis, for it was a Greenlandic, Leif Eriksson,



*There are nearly 400 species of flowering plants and ferns in Greenland, the majority of them 'alpines' (Above) Viscaria alpina, a rose-red alpine near Jakobshavn (Right) In the foreground is bog cotton, behind is a Tind (peak), on the island of Umanak, on its rocky sides it is possible to gather flower seeds nearly all the year round as the winds blow them clear of the snow (Below) Another Jakobshavn alpine, Cerastium*



who first discovered North America a thousand years ago

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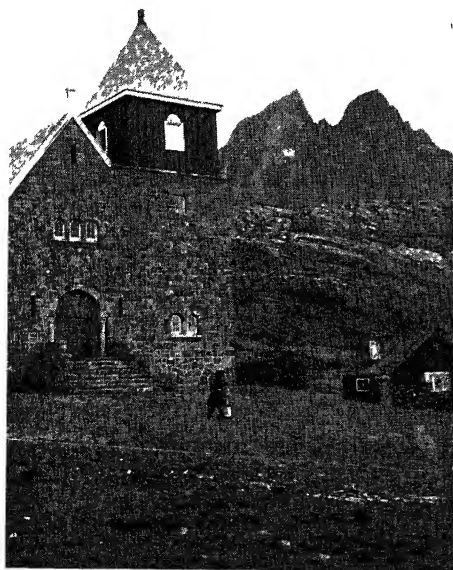
The greater part of Greenland sleeps under a covering of ice hundreds of feet deep. It would not therefore seem to offer many inducements to the botanist. But a green coastal fringe several miles wide surrounds this huge ice-cap, as its emerald border surrounds the snow-drop's petals, and it was as a botanist that I first obtained permission from the Greenland Directorate in 1927 to visit the east and south coasts. I was also given the surprising and gratifying information that I was the first British woman who had requested such a privilege.

That unforgettable journey to the most beautiful land I had ever seen led to a year's expedition to north Greenland in 1928-9, when my winter base was on the island of Umanak. The summer was spent on the island of Igdlorssuit at the mouth of Umanak Fjord. My purpose was the collection of Greenland seeds for a group of British





(Above, left) *The old Greenland dock at Copenhagen, from which, before the war, all vessels bound for Greenland used to start, (right) the parsonage of Jakobshavn, birthplace of Greenland's most famous son, the late Dr. Knud Rasmussen (Below, left) The most northerly stone church in the world, at Umanak, to whose consecration in 1935 the author was invited by the Greenland Directorate*



*Hans, the 'Ice Boy', who, besides bringing her ice for drinking water, from the icebergs which decorate Greenland ports, helped to run the author's house at Jakobshavn*



collectors, including the Royal Herbarium of Kew. A modest success attended this venture, and twenty-three species of Greenland plants germinated in Britain.

I have sometimes been asked how it is possible to collect seeds under the Greenland snows of winter. Though it is true the majority were taken in late autumn when the snowfall was still light, Umanak Island is a huge stack of basalt rising to twin peaks over 3000 feet high, and the winds blew its rocks so clear of snow that the collection of seeds of certain alpine—such as *Rhododendron lapponicum*, the Greenland saxifrage, and the charming little rose-red *Viscaria alpina*—could be carried on practically all the year round. Some of these seeds, however, require the covering of snow before germination takes place, and are therefore hard to rear in Britain.

My third visit to Greenland was again to the west coast. In the summer of 1935 a new stone-built church—the most northerly stone church in the world—was consecrated in Umanak. The Greenland Directorate generously invited me to the dedication of this building, which took place in August, and I asked and obtained permission to travel by a boat earlier in the year to spend the summer botanizing.

With a list of 'wanted' plants from the Natural History Department of the British Museum carefully secured in my pocket-book, I set out from Copenhagen in May, my intention being to spend the summer in the Jakobshavn district of central west Greenland.

There are in Greenland some 390 different species of flowering plants and ferns, mostly of that daintiest type the alpine. They are fit blossoms for a land which in summer more nearly approaches to our idea of Fairyland than any other country. Where, for instance, but in Greenland or Fairyland could the visitor enjoy practically 1440 hours of uninterrupted sunshine during June and July? For those two golden months no night darkened my perpetual day at Jakobshavn, and, by good fortune, scarcely a drop of rain fell to mar my plant-hunting. Only on rare occasions did mist obscure the golden rays which shone day and night through the windows of my little house on the rocks overlooking Disko Bay.

Though I did not own all of this building, for part of it was used as sleeping quarters by the Greenland nurses from the big hospital on the height above, by the kindness of the Danish doctor in charge, Dr Sylvester Saxtorph, I owned two-thirds of it, consisting of the kitchen (with an entry 'off' which my *kufak* or housekeeper, Libbi, used as ward-

robe and larder combined), a sitting-room which opened off the kitchen and had access by a second door into the hall. From this hall a steep ladder stair led to the uninhabited upper storey. My house was run by Libbi and Hans, my 'Ice-Boy'. In Jakobshavn and some other Greenland colonies, owing to the danger of typhoid, water for drinking and cooking purposes is carried from the icebergs which always decorate a Greenland port. The Greenland householder must hire a special servant (at a modest fee of some twelve or fourteen shillings per month) for this duty. Hans was the boy whom I had hired, or rather, who had been hired for me by Libbi. My consumption of water being but small, the Danish housewives of the colony assured me that in a properly run establishment it should have been arranged that Libbi included this task in her ordinary household duties. But I made no attempt to cope with Libbi, and I am quite certain that in that thrifty Danish community her house (and mine) was worse run than any other. My botanical duties, or so I said, kept me too busy to attend to domestic matters, but the real truth was that I was afraid of Libbi.

Her real name was Rebecca Maria Elisabetha Frederika Huck, but owing to the Greenlandic pronunciation of the letter *r*, Rebecca had been shortened to Libbi. The Eskimo language—the native tongue of the Greenlander—is a difficult one for the foreigner to master. The longest known word contains 76 letters and when typewritten is more than six inches in length. Nor can Eskimo be related to any other known language, with the exception of that spoken by the natives of the Aleutian islands, who are second cousins of the Eskimos. Libbi, however, had like myself a working knowledge of Danish, and from my two previous visits to Greenland I possessed also a smattering of Greenlandic. With this hybrid tongue we got along excellently, and before my departure Libbi and Hans added a few words of English to their vocabulary.

The peculiar and interesting Arctic race, of which Hans and Libbi were members, numbers barely 40,000—hardly enough to populate a minor provincial town of the British Isles. This number is out of all proportion to the cultural importance of the race, which is thinly dispersed around the Polar Regions of the globe from Alaska to Greenland, with an offshoot of some 1200 across the Bering Strait at East Cape, Siberia. Yet the language of all these different tribes from Greenland to Alaska is so homogeneous



(Left) *Libbi, the author's housekeeper, in her embroidered kamikker (top-boots), sealskin trousers and anoraq (jumper) with bead collar* (Right) *Libbi's mother, Anana, looking coy, because she has just become engaged to be married again. Behind her is her little house, tacked over with black felt, with its window conservatory. She is embroidering a kamik for her trousseau.*

that the late Dr Knud Rasmussen, when he made his famous sledge journey across Arctic America in 1924, was able to make himself understood all the way in his own Greenlandic dialect. The racial features of the pure Eskimo are also very constant—straight black hair, long narrow skull, high cheek-bones, small eyes and nose.

The majority of the people of west Greenland are a hybrid race, so much mixed with Nordic blood that to find a pure Eskimo is

very nearly impossible. But there are some who conform more closely than their neighbours to the old type, both in appearance and behaviour. Libbi was one of those exceptions. She was Eskimoid, not only to a modified extent in appearance, but also in character. Bold, proud, independent and, like all Greenlanders, regally extravagant, in her veins beat the nomad blood of the free-born. She must rule and would not be ruled. Perhaps on that account she had



remained a spinster. Most Greenland girls marry at an early age, but I judged my *kufak* to be somewhere in the thirties. Her true age, however, was a secret known only to herself and Anana.

Anana (Greenlandic for 'mother') was Libbi's sole surviving parent, an interesting widow who still wore her hair in the singular T-shaped top-knot affected by the Greenland woman of olden times. She and Libbi, who was the last home bird of a numerous family, lived together in a quaint little wooden band-box of a house perched upon the rocks above me. It was tacked over with quantities of black felt, and against its large imported window, as the brief summer drew on apace, pressed a little conservatory of bright plants in pots, grown very successfully from seed.

This type of indoor garden is usually the only attempt at horticulture made by the Greenlander, though some of the Danes have small gardens and ripen during a good summer such hardy vegetables as radish, cabbage, parsley and even potatoes.

In southern Greenland matters are very different, and the farm station at Julanehaab has quite an imposing garden. In north Greenland neither sheep nor cattle can be reared, and hens are a luxury. One summer day the Doctor's wife at Jakobshavn returned from an outing to find her fifteen fine fowls reduced to a few floating feathers, and her huskies looking particularly pleased with themselves. Undismayed by this little accident she had imported a fresh flock, who had been my travelling companions on the voyage up, and despite the absence (or permanence) of dawn, I was still roused at cockcrow by the cry of chanticleer.

If Libbi could not afford me romance in the brief two months of our acquaintance (and I was not so sure about this), Anana made up for it. "Did Libbi tell you that her mother is engaged to be married again?" Dr Saxtorph asked me one day when I had gone to borrow a book from his hospitable international shelves.

No, Libbi had not imparted this interesting item of news. When I questioned her about it, she replied shortly "*Naluvara*" ("I know nothing about it"). I got the impression that her daughter did not entirely approve of Anana's new venture. Some Sundays later, however, Anana was 'cried' in church. Her intended bridegroom was an intelligent Greenlander who had been a member of a Danish scientific expedition and was already twice a widower. The wedding was postponed at his request and I had to leave for Umanak before it took place. He wanted

the happy event to occur on the anniversary of his two previous weddings!

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In the brief two months at my disposal I wondered at first if I should ever be able to collect more than a thousand 'wantedes' for the British Museum, but eventually I secured nearly double that number.

On my arrival in early June I began with *salix*, the ground-willow which espaliers the rocks and rears its crimson and gold-stamened catkins all over the little valleys behind the colony. One species has bright green glabrous leaves, the other has darker ones covered with a slight down. A still more fairy-like form, the smallest tree in the world, *Salix herbacea*—opens a very minute catkin between glossy blades and covers big patches of ground in sheltered places under the rocks, as well as on exposed soil above them. This plant is still more elfin in autumn, when her volatile seed unfolds its satin wing to the winds.

I took fifty branches of the ground-willow in June, marking the spot in order to return (as I had been directed), to collect the leaves when they had grown to autumnal size in late July. They were woody and hard to dry, but they were wanted for reference, and I had to have at least a hundred branches. My three presses were constantly as full as they could be, but I had been advised by Greenland's famous botanist, the late Magister Porsild (who called in at the colony one day in his schooner from Disko Island and spared an hour to take tea with me), that the very best way to dry the leaves quickly and yet retain the colour which in the *salix* is so apt to blacken, was to leave the presses overnight on the top of the stove after the fire had gone out. On the whole, I found this a good plan, though in my establishment it had its disadvantages, for Libbi let the stove go out entirely except when she was cooking on it. I was thus apt to forget all about my presses when the fire went on again and cooking began, with the result that I might find my willows scorched, or, as on the first occasion, soaked to the marrow with cold pea soup which my housekeeper had splashed prodigally about the range.

The children took much interest in my plant-hunting. One morning shortly after my arrival, three of them arrived at my door very early. They bore posies of alpine blossoms, *Cerastium alpinum*, *Saxifraga cernua* and *Potentilla nua*. *Cerastium*, with its large starry blossoms, is one of the first and quite the last flower of a Greenland summer. I have even found it amid the snows of October. *Saxifraga cernua*, a lovely species with milky

flowers on slim red stems, is common in Greenland and grows plentifully on the rocks at Jakobshavn, but is known in Britain only from the summit of one Scottish mountain where it is now said to be almost extinct. The golden *Potentilla nuaea* was one of the species on the British Museum's list, and I looked unsympathetically on its truncated stems in the hot hands of the shortest, moistest boy. But the intention was obviously a graceful one, the children wanted to help my flower-hunting.

I enquired the names of my visitors, and was sobered to find that Peter, Paul and Zaccheus had called on me thus early.

A name is still a very important matter in Greenland, most parents give their children three, four or even five. "The name," says Dr Kaj Birket Smith in his book *The Eskimos*, "was formerly regarded as a kind of extra soul, and when a person dies his name wanders about helplessly until it is given to a new child. By this means a child inherits the qualities of the deceased." Perhaps this is the reason for the Greenland parent's love of Bible names. I have even come across an Ananias in southern Greenland, though it is only fair to say that he did not seem to have inherited his namesake's characteristics!

Fortunately Libbi (who had disposed in a few days of the small store of tinned food I had intended for my summer supply) had not yet discovered where I kept the key of my sweet-cupboard. I found Peter, Paul and Zaccheus to be unluckily as fond of sweets as I am myself. This early introduction to my store was an indiscretion which I soon had reason to repent. Throughout the summer, until the last of my boxes had disappeared, I observed at all odd hours of the day and even well on into the sunlit night, prowling groups of dirty children, clutching poses, ranged outside the high wire fence of the bare enclosure which Dr Saxtorph called my "garden".

There is no use in being sentimental about Greenland children. They are predatory. Like the young of other lands there are among them many who appear (if we believe their own superstition) to have been named after Satan and to have inherited his propensity for mischief. Unlike their namesake, however, they remain unpunished and are treated by their parents with every indulgence.

It was my innocent enjoyment, in sunlit intervals snatched from plant-hunting, to go sketching. The first time I selected as an excellent viewpoint the rocks above the little valley in which my house and the church and parsonage were situated. The latter was an

old and famous building, the birthplace of the late Dr Knud Rasmussen, whose parents and grandparents are buried at Jakobshavn. Scarcely was I set, however, than I heard behind me the hot breath of my pursuers. It was again Zaccheus and Co., to the number of six. Their comments were at first subdued, and from what I could understand appeared to be even flattering.

"It is the hospital she paints."

"No. The church. I know it. Look!"

"I tell you it is the hospital."

"I say it is the ice!" To make sure, Zaccheus approached and sampled my valuable rose-madder on his grimy forefinger.

"Perrit!"

Stung to sudden energy by the swarm of mosquitoes which the presence of so many heated bodies had collected about me, I tried the effect of a word which I had heard Libbi use to scare the dogs from our kitchen door. (When Libbi was not there I surreptitiously encouraged them with Spratt's biscuits brought for the purpose from home.) One of the children fell flat on his face with fright, the others stared at me in such astonishment that my conscience smote me and I spoiled the effect of my remark by a conciliatory grin.

Of all the children Peter was my favourite. He was perhaps seven or eight years old, with a great mop of curly fair hair and curiously arresting green eyes. It seemed as if he could scarcely take these eyes off me, so much interested were they by my strange appearance and character. Peter even walked sideways and then backwards on the path in order to keep his eyes glued to my face.

From his colouring one might have imagined that Peter was one of those Danish hybrids of whom there are too many in Greenland, but Peter's father and mother were Greenlanders. Up in the big red hospital on the top of the rocks his father was coughing his life away. Of the twenty-five patients there, twenty suffered from tuberculosis, the scourge of the Eskimo. A few days later Peter saw his father, dressed carefully in a clean but ragged shirt lacking a button and a pair of split new stockings just purchased from the store, carried down the rocks on a stretcher and locked into the little mortuary, a stone's-cast from the church, to await the rough pine coffin and the last journey to one of the little graveyards, of which there were three or four, tucked away above the colony on the rocky hillside.

On the evening of his father's funeral, which Peter, an only child, attended dressed in a clean white *anoraq* (blouse or jumper), his ragged trousers tucked into the sealskin tops



(Left) *This Greenland family enjoys tent life in summer near Jakobshavn* (Right) *A Jakobshavn mother wearing her hair in the old-fashioned Greenland kilertit (top-knot), bound with a different coloured ribbon according to whether its wearer is maid, wife or widow*



*All photographs by the author*

of his *kamukker* (top-boots), he arrived at my house with a fine bouquet of one of Greenland's few sweet-scented blossoms, the creamy white *Ledum groenlandicum* which the Danes call *rosmarina*. He had been gathering it to twist a wreath for his father's grave.

The funeral over, he was as gay as ever, the ringleader in a crowd of young devils out hunting with sticks and stones for the defenceless chicks of the snow-bunting in their too vulnerable nests amid the heath. Like others of his kind his attitude toward wild life seemed solely destructive.

Too soon came the sad morning, appropriately attended by my first deluge of rain, when the happy days at Jakobshavn were over and I joined the distinguished company of Danes on board *ms Disko* on their way north to Umanak to attend the opening of the handsome new church, designed by the Danish architect Mr Helge Møller.

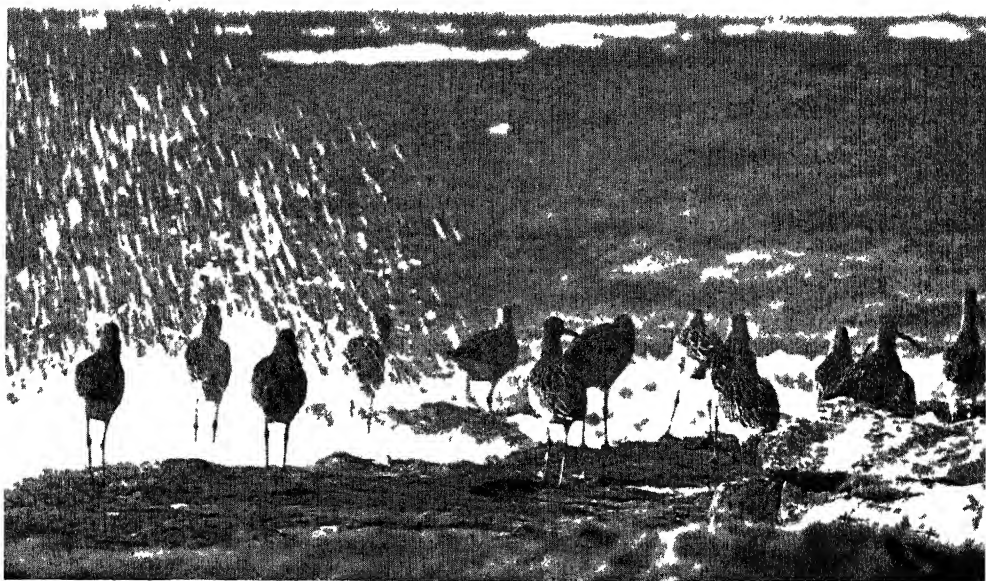
Libbi was too busy mending a broken necklace on the morning of my departure to pay me much attention. She had to look her best when there were so many visitors in the colony. But in the afternoon, resplendent in the beautiful national costume of the Greenland woman, fur trousers, embroidered top-boots and brilliant anorak with its magnificent bead collar, she and Hans

waved me farewell from the top of an iceberg.

It was not my last glimpse of Libbi. Three years later, when attending a conference at Copenhagen, to my great surprise and pleasure I was waited on once more by my *kivfak* in the pleasant dining-room of the Greenlanders' Home in Amager, where she assisted the manageress Mrs Binzer. She had achieved her soul's ambition,—to see Denmark. I bade her farewell again under the August stars, the lights of the beautiful city glittering across the harbour. Our farewell this time was for ever, for Libbi did not live to see those lights extinguished. The following year I got word that tuberculosis had set in after a bad chill, and Libbi passed on.

But the big gold taraxacum (*Nasut orsug palugtuk*—"the yellow one") in the presses of the British Museum still keep her memory bright. For it was Libbi who found for me this flower, so uncommon in Greenland, wanted 'in quantity' by the Museum. She 'pinched' a boat to reach its inaccessible habitat on the shores of a little bay near Jakobshavn, and whenever I see a field of golden dandelions—the flower of Saint Bride—it brings to mind that other resolute spinster, Rebecca Maria Elisabetta Frederika Huck, and the paleochrystic glory of the Jakobshavn Ice Fjord.

# Wildfowling with a Camera



by GUY B FARRAR

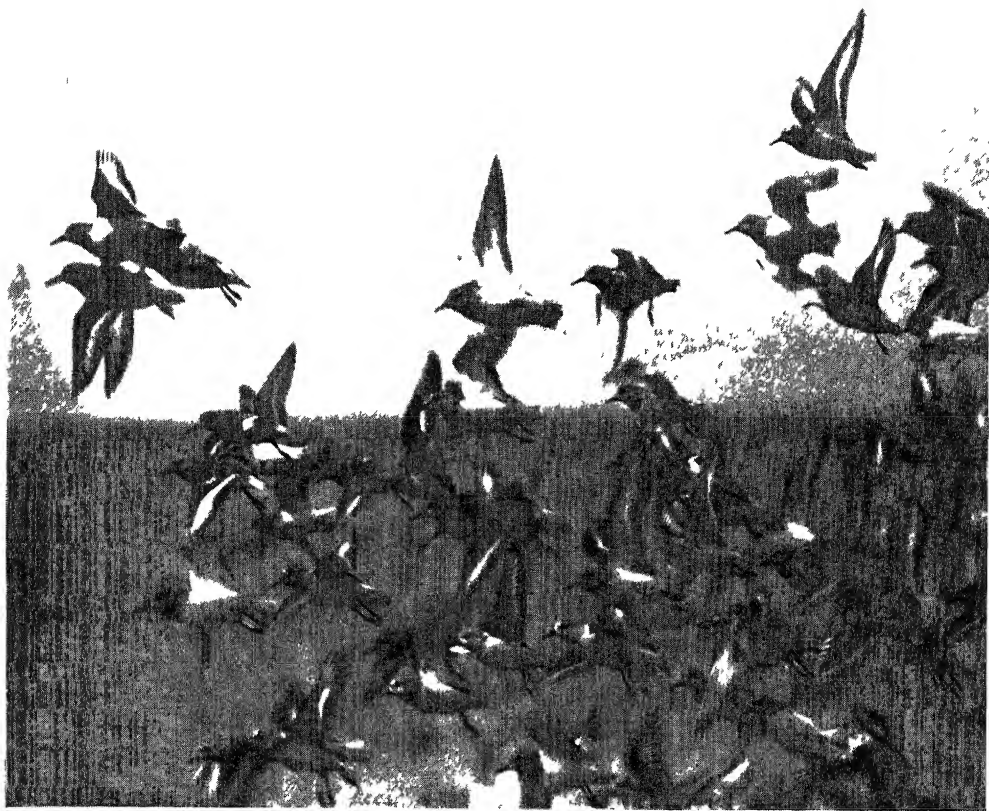
"How do you manage to get close enough to obtain photographs of such shy creatures as wildfowl and waders on migration?" is a question I am often asked by people interested in bird-watching and nature photography. I propose answering the question by discussing the many obstacles to wildfowling with a camera and some of the means of overcoming them.

When a wildfowler discards his 12-bore shotgun for a 12-inch telephoto lens, his difficulties in obtaining a satisfactory 'bag' are increased at least tenfold. A suitable charge of shot, properly directed, will kill a wader on the wing at a range of fifty or even sixty yards. To obtain a photograph of that same wader the wildfowler must induce it to stand motionless at a distance of about ten yards or less from his lens—a formidable problem. And yet it is the wildfowler, the man endowed with the patience to undertake much preliminary observation, who is most likely to achieve success in this ex-

acting form of bird photography.

I have tried many different methods of approaching waders but have found that the only practical one is to use the incoming tide, allowing it to drive them towards my 'hide', which is placed in such a position that at high water it remains just beyond the reach of the full sea mark.

When tides are running high, I go to an estuary and watch the movement of bird life during the two hours preceding full flood. As the incoming tide floods the sands, releasing the marine life imprisoned beneath the dry surface, the waders crowd to the water's edge to feed, only retreating as the rising flood drives them to higher levels, which in turn have now become dinner-tables for the hordes of hungry migrants. But at last even the highest sandbanks are submerged and the hen-footed waders are forced to seek a refuge, perhaps some small island, where they can rest beyond the reach of the full flood until the ebb once more uncovers the sand, thus



*All photographs by the author*

*Sanderling rising from the edge of the tide "Never before or since", says the author, "have I obtained a close-up of these little waders in flight Even 1/100 second exposure was insufficient to arrest the motion of their fast-beating wings as they raced from the rock in a dense cloud"*

enabling them to continue their interrupted meal. This short rest period at the turn of the tide is the only time photographs can be obtained.

My own island, to which the waders come at three-quarter flood and where most of my photographs are taken, is a small outcrop of sandstone, slippery on its lower ledges with a slimy pall of seaweed and bladderwrack, and whitened on its summit with the droppings of cormorants and gulls. At low tide it measures about 200 x 30 yards, at full flood only my hide and a few square yards of rock are visible.

The hide I use is a small green tent supported on four bamboo poles stayed with guy ropes fastened to heavy stones. Smaller stones are used to prevent the bottom of the tent from flapping. On one occasion an inquisitive turnstone carefully investigated

each stone holding down the front of the hide, evidently hoping to find some unexpected delicacy in the green folds beneath them.

From the slits in the sides of my tent I have, at times, had a remarkable view of bird life—the whole island, or what remained above water, carpeted with a mass of vociferous birds, of at least a dozen species. One very hot August day I estimated that 2000 sanderling occupied the rock space in front of my hide. At such times it is almost impossible to find a subject for the camera in the congested mass of birds. The edges of a flock, where a few birds are separated from the main body and silhouetted against a background of sea, are the best places to look for one.

Difficulty may be experienced in separating the species to be photographed, perhaps some unusual visitor, from the common herd. I have painful memories of a party of black-



*Oystercatchers fighting* This photograph was taken by focussing on the birds on the ground and then waiting till the air seemed full of new arrivals. The complete wing and leg movement of alighting, and the preparatory gliding flight are illustrated

tailed godwits who would persist in sheltering themselves behind a row of curlew. I waited in agonizing suspense for over an hour, but all in vain, those wretched curlew never moved and I lost the chance of taking what might have been a unique photograph.

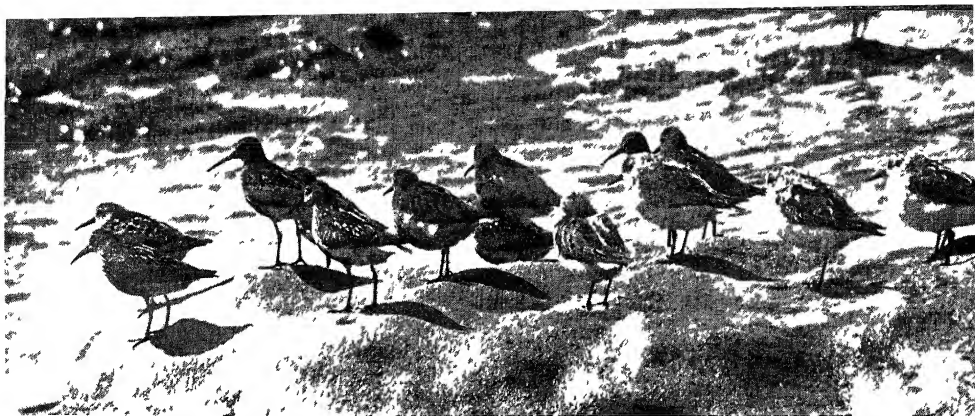
Opportunities for wildfowling with a camera are naturally limited by the height of the tide. In my own case, a tide of suitable height only occurs about four times in each month. Subtract the days in which a strong wind, bad light or lack of birds make photography impossible, and you will have some idea of the time taken to obtain a really good set of wildfowl pictures. To make a compre-

hensive collection of even our commoner shore birds, in flight, resting and showing their seasonal change of plumage, is a task needing years to accomplish, while a whole lifetime might be too short to record the passage of the rarer migrants. My own small collection embodies ten years of continuous watching at all seasons of the year except midsummer.

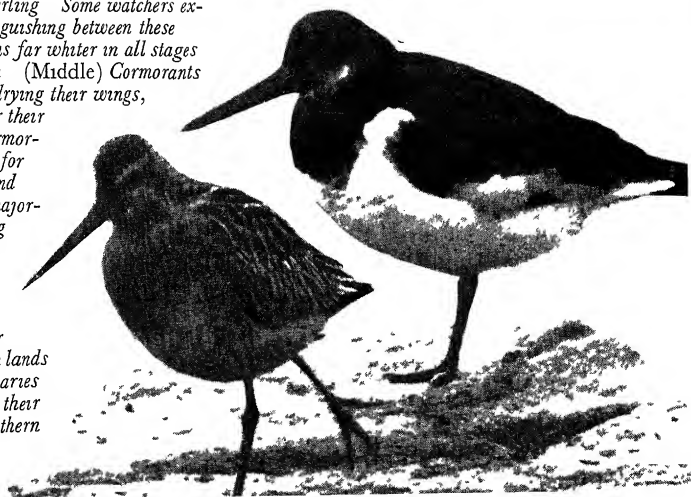
I will describe an actual day spent in the hide, which will give an idea of the excitement and suspense it entailed.

The way to my bird island lies across a stretch of mud flats still wet from the night tide. Great white clouds, looking like giant





(Top) Dunlin and Sanderling Some watchers experience difficulty in distinguishing between these species, but a Sanderling is far whiter in all stages of plumage than a Dunlin (Middle) Cormorants and curlew at high tide, drying their wings, preening and resting after their mudday meal These Cormorants use the 'bird island' for refuge, except in spring and early summer, when the majority migrate to their nesting crags in cliffs and islands around our shores (Bottom) A young bar-tailed Godwit, and, behind, an Oyster Catcher Godwits breed in northern lands and pass through our estuaries on their way to and from their winter quarters in the southern hemisphere





*Waders on the ebb tide Knot—a variety of Sandpiper—rising from the edge of the water to seek new feeding grounds laid bare by the ebb They nest in the farthest north and spend the winter on the sub-arctic foreshores of both hemispheres*

icebergs, float majestically across a Cambridge blue sky, a low, continuous murmur of breaking surf comes from the sand-bar at the estuary mouth, but the flood is stealing up the gutters with the stealthy infiltration of an invading army Terns, both common and Arctic, hover, scream and dive after sand eels and baby fish borne landwards by the incoming tide

The hide is erected, the guy ropes adjusted, the camera and tripod made ready, and, at last, we have leisure to peep through a slit in the side to observe the arrival of our first visitors

We have not long to wait Heralded by a chorus of shrill squeaks, a party of oystercatchers settle on the lower rocks They look very smart in their black-and-white plumage, with their orange beaks and purplish pink legs The White Knight, a pure white bird, is not among them today, but he has visited this estuary for many years past and this season I saw another oddity, a bird with a white head and neck, a most unusual-looking oystercatcher

608

A cloud of small waders sweeps round the island, now rising high, now skimming low over the water, before finally alighting not far from the hide They are dunlin in full breeding plumage, black-breasted and chestnut in their nuptial dress Many of them in a few weeks' time may be nesting within the Arctic Circle

Some herring gulls and more oystercatchers arrive and then a party of loud-voiced redshank, the rock is becoming quite crowded, but round my hide there still remains an ever-narrowing circle of unoccupied ground About a dozen cormorants, probably non-breeding birds, approach the northern end of the island and flop heavily into the sea before waddling ashore with that delightful nautical roll that so befits these expert mariners of the bird world

As the tide nears its height, the bird population becomes more and more congested, late comers finding it difficult to secure a landing ground

I must bag that bunch of dunlin grouped at the water's edge, but while I am focussing,

adjusting the stop and setting the shutter, a herring gull has alighted nearby—my picture dissolves into a stampede of twinkling feet hurrying their small owners away at full speed.

Three wimbrel stand tall and stately among the lesser fry, but they are in a hopeless position for a photograph and after a regretful glance at their image on the ground glass I turn to other subjects.

Suddenly, in the crowd, I see a turnstone in full breeding plumage and, oh joy! he runs to a rock edge, thus giving me a sea background for his portrait. Now I have him focussed, the stop adjusted, the shutter set. Will he never keep still? Stop bobbing that black-and-white head! At last he stands motionless. The focal plane shutter descends, I have secured my trophy—a close-up portrait of a bird never known to breed in these islands.

Excited screams from overhead announce the arrival of a party of Arctic terns. Hastily I set my shutter to 1/1000 of a second with an open stop. I might 'shoot' them in mid-air, an entrancing cascade of angelic wings with a background of deep-blue sky, a picture needing colour film to portray its real loveliness.

Without warning a strange uncanny silence falls on the noisy multitude and every eye glances uneasily upwards. A shadow passes over the island—the shadow of death. Even in the seclusion of my hide I feel a thrill as the lord of the marshes, the undisputed monarch of the estuary, passes on his way—a peregrine falcon looking for his midday meal. Now I can see him as he glides past the end of the island on those sinister, bow-shaped wings, a danger signal to every bird that flies.

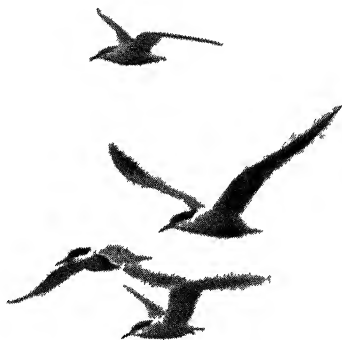
The banks are beginning to uncover and small parties of waders leave the island for their breeding grounds exposed by the ebb.

Others remain sleeping on one leg, preening, or bathing in the rock pools left by the receding tide. A cormorant is drying his wings in spread-eagled fashion and another, still engaged in his ablutions, beats the water violently in his passion for cleanliness. I love watching cormorants, their unconscious humour is a source of endless delight.

Although stiff and hot with three hours' crouching in the hide, I am sorry the time has at last arrived for me to emerge. The startled looks of this purely avian gathering at my sudden appearance in their midst has its comic side. The curlew and small waders leave hurriedly in much confusion, but the gulls and cormorants linger, and with much grumbling depart reluctantly, leaving me to pack up my gear and wade through the knee-deep stretch of muddy tideway on my homeward journey.

My bag may, and often does, consist of only the unexposed film I brought with me. By a lucky chance I may have secured a new species for my collection or perhaps a group of common migrants in an unusual or particularly pleasing attitude, but whatever the harvest, the labour has been well repaid. I never know, when I set up my hide, what uncommon wader—perhaps one never before photographed in the British Isles—will alight within range of my lens and by a stroke of fortune will disentangle itself from its unwanted neighbours and so gain a permanent place in my collection.

Grey plover, bar-tailed godwits, sanderling, curlew, sandpiper, these and many other northern breeders can only be photographed in these islands at migration time or in mid-winter, and only on our estuaries or foreshores at the turn of the tide. In its very uncertainty lies half the charm of photographing wildfowl.



# Fishermen of the Moray Firth

by PETER F ANSON

THE Moray Firth is an arm of the North Sea. In a restricted sense the base runs from Lossiemouth, Morayshire, to Tarbat Ness, Ross-shire, a distance of 21 miles. In its wider meaning the Firth forms a triangular area, with its apex at the mouth of the Beaulieu, and the extremities of the base at Kinnaird's Head, Aberdeenshire, and Duncansbay Head, Caithness, a distance of 78 miles. Around the Moray Firth, especially on the south side, are numerous small towns and villages whose history is bound up with that of the fishing industry. The most important today are Wick, Helmsdale, Avoch, Narn, Lossiemouth, Burghead, Buckie, Portknockie, Whitehills, Macduff and Fraserburgh.

There is a certain affinity between all these places, though each possesses a very distinct character. It might be easier for a complete stranger to describe the 'family likeness' than for me to attempt to do so. I have known the Moray Firth coast for more than a quarter of a century and for a good many years have made my home in one of these fishing communities. The result is that I know the land and the people so intimately that it is difficult to see them from a detached point of view. But when I am away from home and try to form a mental picture of the Moray Firth coast, I see it painted in silvery greys as a water-colour drawing with strongly defined outlines and firm shadows. The dry bracing climate has a lot to do with the picture. Mist and fogs are infrequent. We get more than the average amount of sunshine, even if the winds have a biting quality. These fishing towns and villages have little in common with those of Cornwall. They lack the romantic charm and their character is much more suggestive of frugality and thrift. The grey stone houses with their roofs of slate or tile are built four-square, long and low. What strikes most visitors is the cleanness and neatness of the houses. There is a hard look too about the people, but this hardness is no more than superficial. Underneath they are as emotional as any race in Britain, probably more so. Periodically in the past they have been swept off their feet by the stress of religious 'Revivals'. Even in normal times one has only to scratch the surface to arouse an outburst of emotion that would strike the average Englishman as almost indecent. Again, this temperamental quality has little



in common with that of the Gaelic-speaking Highlanders. The Moray Firth fisher folk are predominantly Norse in ancestry, though there is a certain amount of the Celt in them as the result of marriage with families from the Highlands.

The life of these numerous fishing communities centres round the harbours which are found in every town and most of the villages on the Firth. The majority were built during the last century, some have been enlarged in recent years and are up-to-date, others have been allowed to fall into ruin and are no longer used. Forty years ago these harbours were filled with a forest of tall masts and brown sails, but today the scene is very different. Sailing craft have been superseded, first, by steam drifters, and these are rapidly giving place to motor vessels. Twenty years ago when the herring fisheries were still prospering it was a wonderful sight to come down on one of the larger harbours on the south side of the Moray Firth and behold hundreds of steam drifters squeezed together like sardines in a tin, with little space between them. There was a riot of colour in their paint-work: every combination was to be seen, but reds, blues and greens predominated. Everywhere fishermen were at work daubing on more and yet more paint to funnels, buoys, capstans, ventilator cowls, or picking out with gold leaf some last detail of



Frank Aschise

*Motor seine-net boat entering Macduff harbour. Since about 1921 Danish seine-net fishing has almost entirely superseded line fishing in the larger ports on the Moray Firth, and is carried on practically all the year round*

lettering on the bows. Some of the crews adorned the funnels of their vessels with elaborately painted shields, depicting a landscape or a heraldic device.

The Moray Firth fishermen have not lost their passion for colour, but there is less scope for splashing it about on the modern motor-driven vessels which have now taken the place of steam drifters in most of the ports.

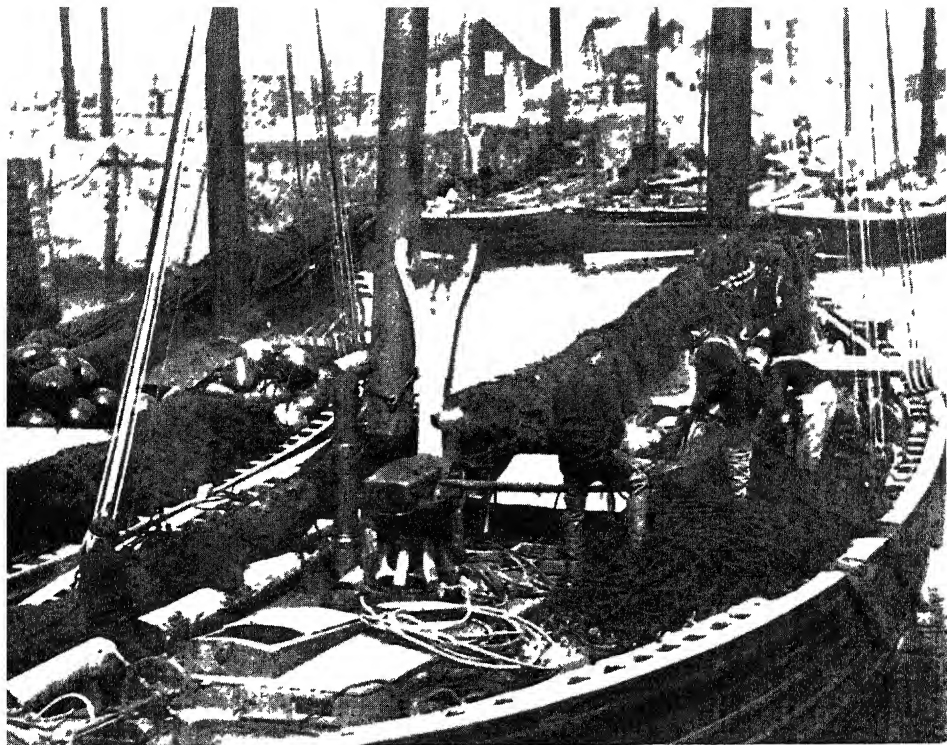
The fishermen are engaged in both drift-net and seine-net fishing—the former method being used at certain seasons of the year for herring, the latter practically all the year round for white fish. Steam vessels, known as drifters, are used for herring, motor vessels for seine-netting. The Danish seine-net made its appearance on the Moray Firth about 1921, since when it has almost entirely superseded line fishing except in a few places.

The herring industry only began to be of commercial importance after the Napoleonic wars when curing stations were opened at Helmsdale, Fraserburgh, Macduff and else-

where. Until then the Moray Firth fishermen had regarded herring rather as a bait for white fish. The herring fisheries reached their greatest prosperity between 1900 and 1910. After the last war foreign markets were lost and prices fell, with the result that there was a sharp decrease in the number of men and women employed, and both vessels and gear deteriorated. The amount of herring landed in ports on the Moray Firth was steadily declining before the war, and far less curing was being done.

Indeed for many years before the present war the herring fisheries had been run at a loss. The total number of vessels in Scotland had decreased from 884 in 1913 to 485 in 1937, and the majority of these belonged to the Moray Firth.

The local drifters were engaged in fishing during the different seasons either on the west coast of Scotland, the Shetlands or on the east coast of England as far south as Yarmouth and Lowestoft. So their crews were



(Above) 'Zulu' and 'Fife', herring drifters in Macduff harbour fifty years ago, when the Moray Firth harbours were forests of tall masts and brown sails (Left) 'Zulu', herring drifter. These magnificent vessels were common on the south side of the Moray Firth between 1880 and 1900. The few which are left have been fitted with motors and the masts cut down.



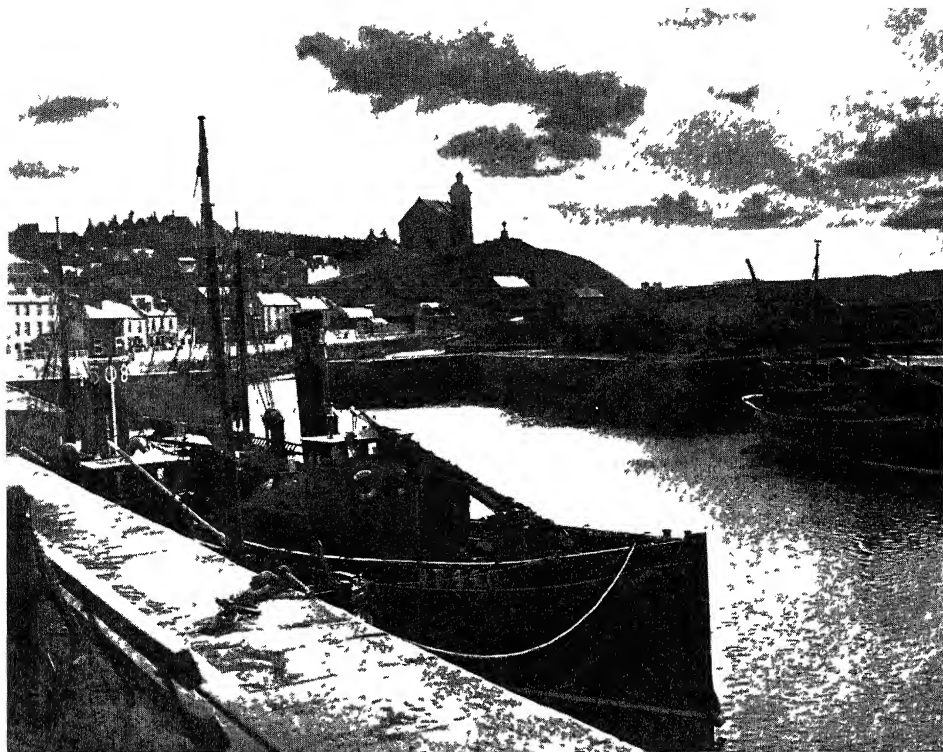
H. Jenkins

often away from home for nearly half the year.

In some cases fishermen own both steam drifters and the motor boats that are used for white fishing when herring are not in season. The vital difference between the Moray Firth fishermen and those of England is that the former are still the owners, or at least the nominal owners, of their drifters and motor boats. As the Report of the Economic Advisory Council on the Fishing Industry, issued in 1932, pointed out

In the main each Scottish boat stands by itself, and there is no pooling of results and no possibility of a loss on one boat being balanced by the success of others, as in the case of a company owning a number of vessels. This is mitigated to some extent by the fact that a small number of individuals, mostly persons on shore, have a share in several boats. The men are also





Frank Ritchie

*Steam drifters in Macduff harbour Before the war all the larger ports on the Moray Firth owned fleets of these vessels They were engaged in herring fishing on the west coast of Scotland, the Shetlands and along the North Sea coast as far as Lowestoft, according to the season of the year*

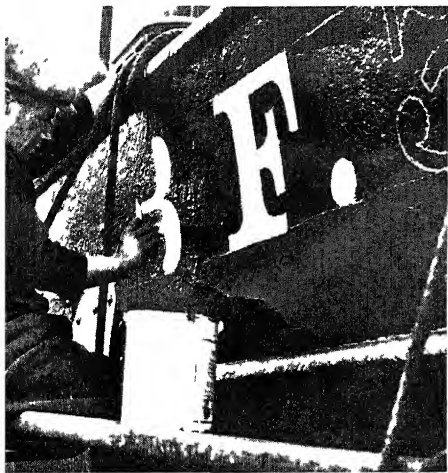
extremely conservative. The most serious limitation, for example, of the possibilities of the new type of motor drifters, fitted with semi-diesel engines, with which experiments are being made, lies in the fact that the fishermen are prejudiced against change, and in the lack of men sufficiently skilled to act as drivers and mechanics. Their spirit of independence is fostered by the organisation of the industry.

So you must picture more than 200 steam drifters belonging to the Moray Firth ports, each of them more or less independent, with a complement of nine or ten men, most of whom are usually members of the same family or related to each other. In some cases one or two hired men are carried, generally crofter-fishermen from the Highlands. The fireman, engineer and cook are paid wages, the rest of the crew receive certain shares in the earnings of the drifters.

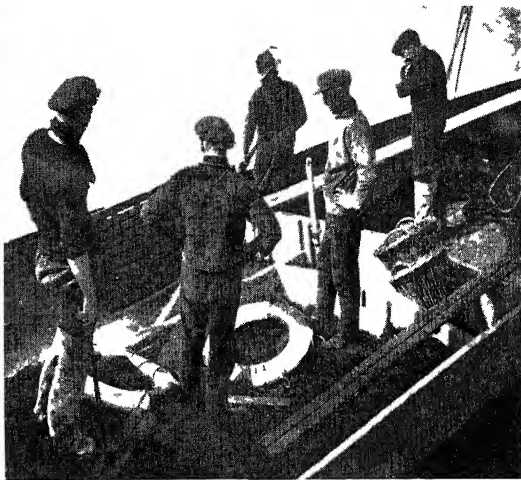
But in 1939, so serious had the situation

become that many men who had hitherto spent the greater part of the year in herring fishing had left their homes and taken jobs in Aberdeen trawlers or in the merchant service.

The men who were engaged in white fishing with motor boats were in a more fortunate position. Fish was plentiful within a few miles of the shore and markets were certain. This is even truer today, in fact the limited number of men who have not been called up for service in the Navy are earning more than they have ever done in their lives. In most ports the motor boats put out to sea every morning, unless there is a gale blowing, and are back again in port early in the afternoon. The fish is landed at once, sold on the quays and then sent off to some central market either by road or rail. Since the outbreak of war, fishing has been concentrated in the larger ports, and some of the smaller ones are closed altogether.



Frank Ritchie



Frank Ritchie

(Left) *Painting the port registry letters and numbers on a fishing boat* The Moray Firth fishermen have a passion for paint and colour (Right) *Group of fishermen wearing the characteristic brown jumpers over blue jerseys* (Opposite) *The launch of a modern type of motor fishing boat at Fraserburgh*

It is difficult to visualize the life of the Moray Firth fisherfolk of a hundred years ago. Not only have methods of fishing changed but also standards of living. Take Buckie for example. I doubt if there are many girls in this busy town of nearly 9000 inhabitants who know how to bait a fishing line even if they are still capable of mending herring nets. A hundred years ago no fisherman could have carried on his job without the help of his wife and daughters. For there was a saying that "no man can be a fisher and want a wife". The women used to drag the small open boats up on to the rocky shore and launch them again. Here, and in many other places where there was no harbour, wives would take their husbands in their arms and carry them to their boats and carry them back when they returned from sea. The women took the fish from the boats, gutted them and carried them to market or around the country. They baited the lines and collected heather, moss or furze for fuel.

The Buckie fishermen of the middle of the last century were a magnificent set of men physically, well built and tall, capable of enduring immense fatigue and hardships. When one sees the steam drifters in which the present generation are accustomed to work in comparative comfort, or the up-to-date motor vessels, one wonders what the crews would

say if they had to venture out in little open boats, with no sort of protection against cold or wet. It was not until 1858 that the first Buckie boat was fitted with any sort of fore-castle or deck. Before going to sea, a supply of barley meal, a couple of cooked haddocks, a pint of kail broth in a flagon and an onion or two—all rolled up in a cloth—were taken aboard by each member of the crew. Each man or boy had his special job to do and only in an emergency would assist each other. Those amidships had to bail out the boat, the man on the lee side having plenty to do while his shipmates looked on.

A contemporary writer gives a vivid picture of Wick in 1840.

The herring fishing [he says] has increased wealth, but also wickedness. No care is taken of the 10,000 young strangers of both sexes who are crowded together with the inhabitants within the narrow limits of Wick during the six weeks of the summer fishing season, when they are exposed to drink and every other temptation. Fever of a typhoid kind is seldom absent, and is acute during the fishing season. There is a vast consumption of spirits, there being twenty-two public-houses in Wick and twenty-three in Pulteneytown.

The filth of the streets was indescribable. During the six-weeks summer season it was no uncommon thing for more than five

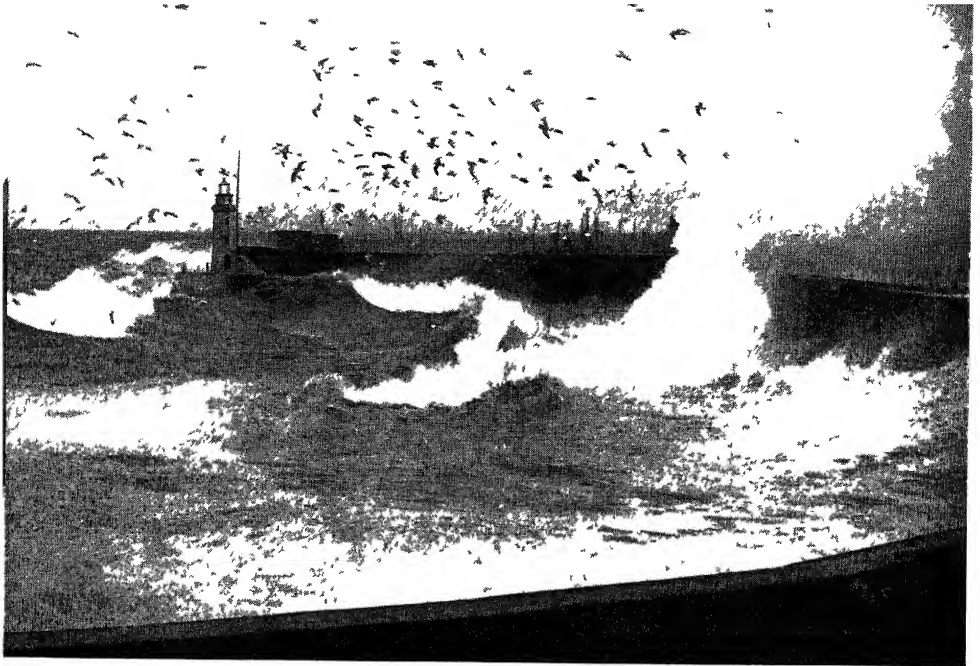


*Frank Ritchie*

hundred gallons of whisky to be consumed in one day. Among the fishermen of that date taking snuff was more popular than smoking, which seems to have been a more feminine habit.

After the last war Wick 'went dry' and its public-houses were closed. Today the villages along the coast south of Wick are deserted, their harbours and old curing stations derelict. There are no herring drifters left in Wick itself. At Clyth, where the number of boats is now about half a dozen, there were about six hundred in 1855. It must have been a wonderful sight to watch this fleet putting out to sea on a summer afternoon or to have witnessed the return home the following morning to one of the many little creeks among the rocks where often fifty to one hundred small brown-sailed open craft would be crowded together. The fishermen used to put out to sea and shoot their nets about dusk. They were a pious and devout lot and it was the custom to "engage in worship" after the nets had been shot. A portion of a psalm was sung, followed by a prayer, and, to quote the parish minister of Latheron, "the effect is truly solemn and heart-stirring as the melodious strains of the Gaelic music carried along the surface of the waters, several boats being sometimes engaged, spread throughout the whole fleet."

At Avoch—a little village nestling beneath wooded hills of the Black Isle of Ross-shire, more suggestive of Devonshire than the north-east of Scotland—the fishermen of a century ago had a reputation for hardiness, skill and industry. Brought up on a diet of oatmeal, potatoes and fish, they were a stalwart breed, the women as strong as the men and able to carry immense burdens. They thought nothing of bearing a load of a hundred pounds of fish in a wicker creel on their backs. Just as at Buckie and elsewhere, the women of Avoch used to carry their husbands to their boats because there was no harbour and the men liked to go to sea with dry feet. They brought in the fish and gear from the boats and never objected to wading into the sea, no matter what might be the weather or the season of the year. Despite this Spartan regime there were few women in Ross-shire so cleanly, healthy or long-lived. The men were at sea all the week. Besides helping their husbands the women gathered bait, prepared the lines and cultivated hemp. Nets were made locally for other fishing villages. Even the aged and infirm worked at net-making. "Except for a few days about Christmas," writes the parish minister, "or on the occasion of a fisher's wedding, there are none but little children idle in the whole seatown of Avoch."



*Frank Ritchie*

*There is a certain affinity between all fishing ports on the Moray Firth. Above is a typical winter day at Macduff, and, below, the same harbour on a summer afternoon, "painted in silvery greys with strongly defined outlines and firm shadows." Mist and fog are infrequent and there is more than the average amount of sunshine*

*Frank Ritchie*



These Avoch men would venture out to sea as far as the coast of Northumberland, with neither chart, compass nor any knowledge of navigation, their small, frail craft carrying an enormous area of canvas. Their skill and alertness in setting and reefing their sails was always a source of wonder and admiration, and it was seldom that lives were lost.

Whitehills in Banffshire seems to have been almost as prosperous in 1840 as it is today, though changed in many ways. We learn from contemporary writers that the people were clean and thrifty in their habits, and the parish minister was proud to inform the readers of the *New Statistical Account of Scotland* that "in Whitehills there are twenty to thirty men who can conceive and utter an extemporary prayer with no less fluency and with little less propriety than most educated ministers". At Pennan, a tiny village hidden beneath lofty red-sandstone cliffs on the borders of Aberdeenshire and Banffshire, the fishermen do not seem to have been so pious or law-abiding as those of Whitehills, for we are told that most of them possessed guns and were frequently convicted of poaching and also given to smuggling.

Everywhere round the Moray Firth coast the boys went to sea very young and consequently got little education. By eighteen most of them had acquired a share in a boat and were married. Fishermen's weddings were wonderful affairs a century ago. Before the ceremony the kirk session exacted a pledge of a half a guinea that no rioting or fighting would take place. If, as a result of too much whisky having been consumed, there was brawling or even bloodshed, the pledge was given to the poor. But if the party managed to behave itself, the money was returned to the bridegroom the following Sabbath. Sometimes there took place what were known as "penny weddings", to which all the neighbours and their friends were invited. Each guest was supposed to contribute a small sum to the marriage celebrations. After the function had been concluded the bride used to visit her neighbours, who were bound to give her a piece of furniture or other substantial gift.

The typical Moray Firth fisherman's house of a century ago consisted of two or three rooms, with a lean-to shed for the nets and gear. Some were roofed with tiles or slates, but the majority were still thatched with turf. It was quite common in some of the smaller villages on the coast to smoke haddocks over the peat fire in the living-room. Nearly everything needed for the fishing was made

at home: nets, lines, ropes, sails, creels, sculls and baskets.

Perhaps the most vivid description of the life of the fishermen on the north side of the Moray Firth during the first half of the last century is that given by Neil Gunn in his novel *The Silver Darlings*. The author was born and brought up among the fisher folk on the coast of Caithness. He tells us how the crofters who had been driven down to the shores by the lairds found themselves faced with starvation. Their cattle and sheep had been taken from them and the only hope of making a living was to catch fish. So these landmen became seamen—against their inclination and previous tradition of living. They bought boats, nets and lines, and were the ancestors of hundreds of the present generation of prosperous fisher families all round the Moray Firth. For as time went on many families migrated from the coast of Caithness and Sutherland to the south shores of the Firth where there were better chances of earning a living. So today we find families with Highland names in the towns and villages of Banffshire and Morayshire, the descendants of those pioneer crofter-fishermen of the last century.

Although there have been great changes in the manner of life among the Moray Firth fishermen, yet even today they form a distinct community apart from the country dwellers and shopkeepers. Except in the few isolated villages where line fishing is still carried on, the women play a far less important part in the actual work than formerly. Until the war it was still customary for girls from most of the Moray Firth coast to spend the greater part of the summer and autumn away from home, engaged in the dirty and laborious job of cleaning herring for curing. In June and July most of them would go to Stronsay in the Orkneys or Lerwick in the Shetlands, later on migrating to Fraserburgh or other ports on the mainland of Scotland. During October and November they would be working at Yarmouth and Lowestoft. So the women managed to do a fair amount of travelling and thus gained insight into other folks' lives and customs. In a few places one may still see the older women tramping the countryside with heavily laden creels of fish on their backs or in baskets. But with the competition of motor transport and now the necessity of obtaining permits to sell fish, their means of earning a livelihood is fast disappearing. In a year or two the last of the fish 'wives' may have vanished.

As to the homes of the present generation of fisher folk, it is difficult to convey an idea of

their modernness, even luxury. Some of the houses give one the feeling that they are not meant for living in but only to be admired: there are many where no work is done except in the kitchen. Nearly every fisherman redecorates his house inside and out every year. There is a fierce rivalry among the women, who never seem to stop scrubbing, cleaning and polishing. Almost every front door has a brass plate with the name of the owner engraved on it. The craze for being 'up-to-date' leads to disastrous results in many homes, for it involves the sale or breaking-up of good solid 19th-century furniture and the substitution of mass-produced 'suites'.

When the herring fisheries were at the peak of their prosperity just before the last war, the more wealthy families were unable to resist the urge to erect large ornate houses. So in Buckie and elsewhere along the coast you find amazing bits of architecture which in years to come may be regarded as interesting 'period pieces', solid mahogany front doors, at least two spacious sitting-rooms, filled with heavy furniture, staircases with elaborately carved banisters, often with a stained-glass window depicting the owner's steam drifter as the central feature, a kitchen and bathroom, and finally a spacious loft for storing the nets and gear. It is quite common to find families which live in these lofts most of the summer, for since the herring fishing declined they have been glad enough to take in lodgers.

There are still a few old houses where the traditional built-in beds have been retained, though the doors which once closed them have been replaced by curtains. But the younger generation does not approve of built-in beds. The other day a certain prosperous fisher 'wife' happened to look around my own kitchen and was almost shocked when she noticed that the venerable bed was still *in situ*. "They're not supposed to be hygienic," she remarked. "That may be so," I replied, "but you can't beat a built-in bed on a cold winter night."

This passion for building and redecorating houses which is characteristic of the Moray

Firth fisher folk, may be due to the lack of any outlet for their emotions, particularly among those who belong to the different groups of the Plymouth Brethren. The 'Brethren' flourish in nearly every fisher community along the Moray Firth coast. They are not allowed to smoke, buy newspapers (though a glance at somebody else's paper does not involve a breach of the law) or listen to the wireless. Unlike the rest of the community who are keen 'film fans', they may not patronize the cinema, and of course they are rigid teetotallers.

Taken as a whole, there are no kinder and more friendly people in Britain than the hard-working fisher families. There is a refreshing simplicity and spontaneity about them. Despite the industrial revolution these more or less self-supporting and independent communities in the north-east of Scotland have so far managed to retain their individual personalities. But their future is precarious. Will the Scottish system of family-owned boats be able to stand up in the long run against English boats, based on shore syndicates and capitalism? What is going to happen to the once flourishing herring curing industry after this war? Will it be possible to recapture the foreign markets? If the present method of intensive seine-net fishing goes on unchecked, with no close seasons, will the Moray Firth be exhausted of its supplies? These and many other problems face the fishermen of the Moray Firth and at the moment it is dangerous to prophesy how they are going to be solved.



Frank Ritchie

*Fisherman taking his bedding home at the close of the season*



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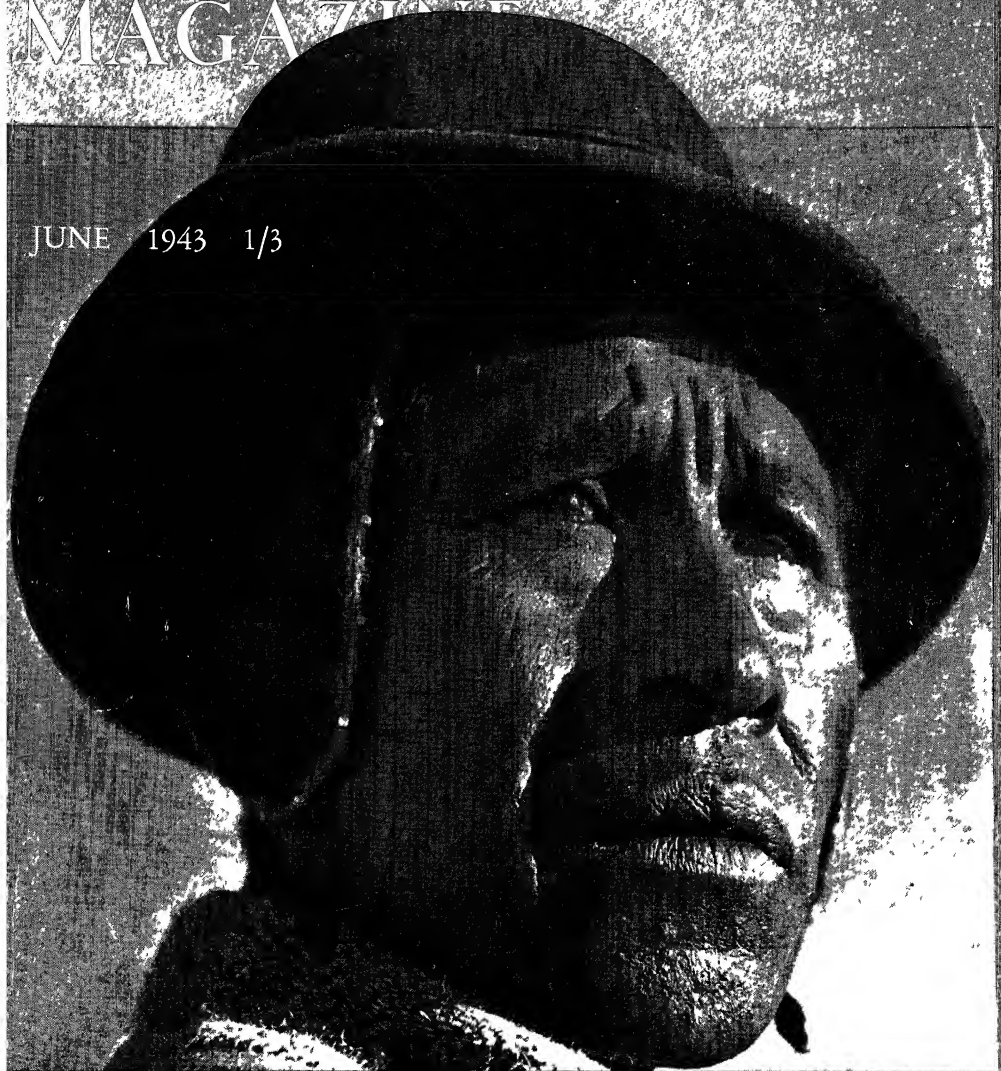
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# Undeveloped South America

## Lands of Tomorrow

by F A KIRKPATRICK, F R Hist S

It has been rightly said that when—just 450 years ago—Queen Isabel of Castile accepted and aided Columbus's audacious design to traverse "The Ocean Sea" (*el mar oceano*), her decision was a "great act of faith"—faith in the future. That note of faith was confidently re-echoed a few months later when Columbus, on his return from his westward quest after touching the fringe of the New World, declared "All Christians shall here find refreshment and gain". Some twenty years later Balboa, second in the roll of Western discoverers, wrote from the Isthmus to the Spanish King concerning "great secrets of marvellous riches"—secrets to be revealed in the future.

The origins of Spanish America recall the human note pervading the whole story of South American growth—a stirring record of hopes, endeavours, trials, illusions, set-backs, recovery and solid achievements. The bare statistics do not disguise the tragedies as well as the triumphs through which these results have been attained. Such vicissitudes mark the development of all new lands and are not peculiar to South America. But South American progress in the past and the promise of its future continuance offer a special appeal to the imagination owing to something unexpected, uncommon and bizarre in the contrasts that distinguish South American scenes—frozen heights and torrid valleys, earthquakes and showers of ashes, volcanic peaks in the central regions of tropical heat shooting their fires far above slopes of perpetual snow, dense jungles and immeasurable treeless plains, rivers, which rival seas, with a yearly rise and fall of forty feet or more.

The proud device imprinted on the coinage of Spain—*Plus ultra* ("Farther yet")—provides a significant text for anyone attempting to gauge future possibilities in the light of past realities. For this pregnant epigram is not only a proclamation of advance already accomplished, it is also a prevision of the future. Its bold prophecy has been abundantly

fulfilled by the achievements of four centuries and today still points onwards.

The continent of South America is a clearly-defined geographical entity, much less in extent than North America, yet covering a substantial area about double that of the United States, including Alaska. The population, according to the latest available



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*Black Star*

*The Andes In their vast extent of over 4000 miles the Andes show much variety of climate, altitude and aspect Here is a characteristic view of the higher Cordillera in the tropics, which reveals a mountainous mass of bare rock reared into the clouds from the lofty plateau*

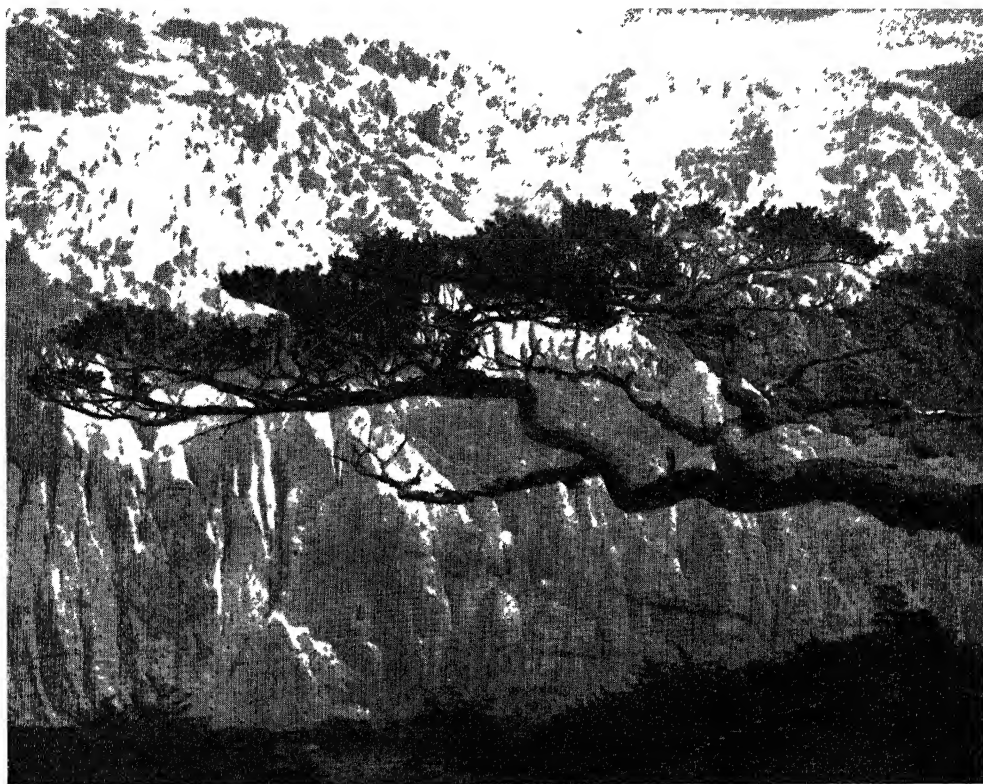


*Barnaby's*

*The Amazon River An Indian family, expert navigators of their native-built canoe, make their way slowly upstream, skirting the shore to avoid the force of the current The picture shows the dense and dank undergrowth of the Brazilian jungle beneath the shade of the lofty trees*

*(Opposite) Tierra del Fuego This curiously misnamed 'Land of Fire'—so called from Indian camp fires seen on the shore by the early navigators—has nothing fiery about it a bleak, frosty region where westerly gales force vegetation close to the ground*





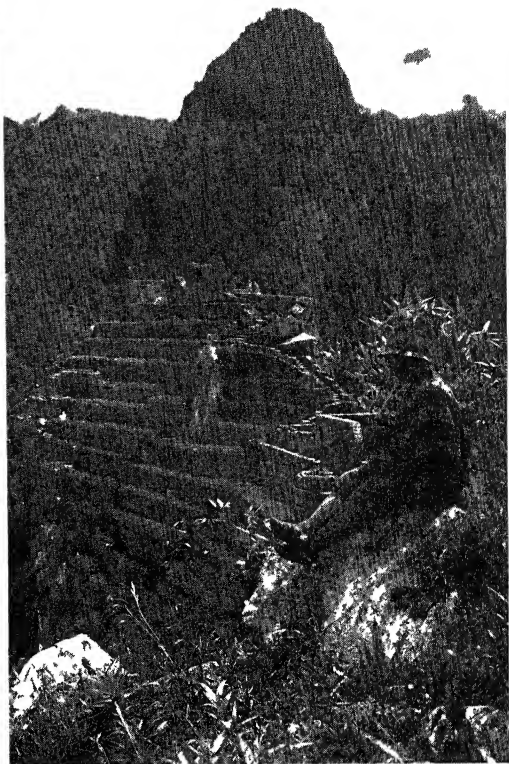
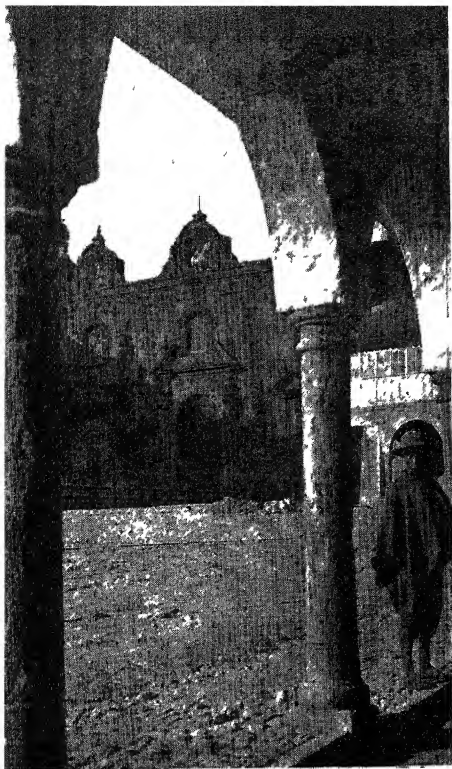
*Black Star*

statistics, is 90 millions—less than two-thirds of the United States population—but this is probably an over-estimate. Clearly there is room for increase and expansion—as the title of this article implies. The continent measures  $67^{\circ}$  of latitude from the tropical Caribbean coast southward to Antarctic seas. It extends, in a broad mass, through northern equatorial regions and traverses the whole of the Southern Tropics. Thence, narrowing southward, it thrusts itself into the cool regions of the South Temperate Zone, far beyond the furthest limit of other southern continents. Thus, to quote from *Latin America* (Cambridge Historical Series), South America,

extending through every habitable latitude, possesses every climate and every variety of soil, and accordingly yields, or can be made to yield, all the animal and vegetable products of the whole world. Moreover, most of the South American republics also contain territory of every habitable altitude, so that a man can change his climate from torrid to temperate and from temperate to frigid simply by walking up-

hill, and equatorial lands can produce within the range of a few miles all the products of every zone. Most of the republics also furnish an abundance and variety of mineral products.

The dominating feature of the continent is the vast mountain chain—in great part a system of two or even three parallel ranges—the Cordillera de los Andes, which follows the Pacific coast for above 4000 miles—the longest mountain chain in the world, and in its towering height only surpassed by Himalayan peaks. This stupendous barrier, which might be described as an eccentrically placed watershed, shapes the whole continent. The eastern range of the Cordillera, with its precipitous descent towards the interior, gives rise, through tropical rains and melting snows, to countless streams which rush down through rocky mountain gorges and then wind through low-lying lands to create the colossal water system of the Amazon, the Orinoco and the western affluents of the Paraguay. Thus, springing from sources not far distant

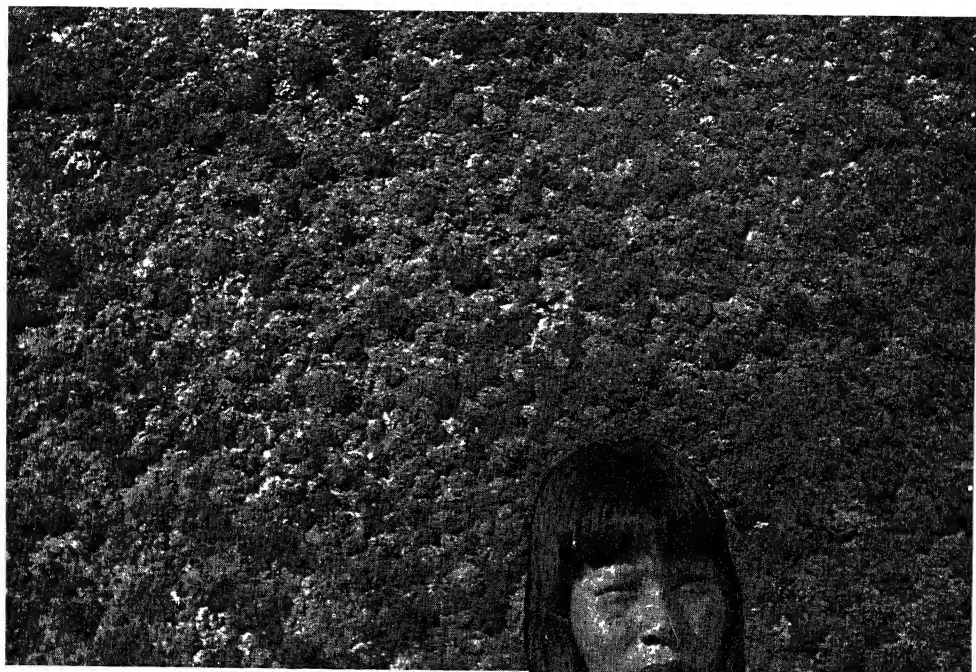


from the Pacific, these waters traverse the whole continent and find their way to the far Atlantic. Such, in the main, is the origin of the huge Amazonian forest, the dense and lofty woods which fill the greater part of the Amazon valley and extend southwards along the Paraguay. The great forest is inhabited only by sparse Indian tribes, it is a hot, damp wilderness of teeming vegetation, with a prolific soil, but for the most part unexplored except where navigable watercourses admit access to its sombre recesses. Some of these waterways are great rivers, affluents of the Amazon, navigated by steamboats. Others, more numerous, are obscure channels or offshoots, which provide a path for the canoe of the rubber-gatherer. But exploration from the air in recent years is preparing the way for fuller knowledge and possible future use.

The western slopes of the Cordillera, facing the Pacific, offer a singular contrast. Here, between the Ocean and the towering barrier of bare rock, there stretches for a thousand

miles through Southern Peru and Northern Chile a long strip of rainless desert. The dry sterility of this forbidding region enables it to supply fertility to other lands through its deposits of nitrate and guano.

The Cordillera of the Andes northwards from Tierra del Fuego—here for the most part a single chain with many outlying spurs—separates the long narrow territory of Chile, “shaped like the sheath of a sword”, from the broad plains of Argentina. Thence the chain divides northward into two parallel ranges, enclosing between them the plateau of Bolivia, a temperate land within the tropics, at a height of 9000–12,000 feet above sea-level, or even higher. Northward again the Eastern and the Western Cordillera draw somewhat nearer, to enclose the mountain region of Peru, traversed by an intermediate range. North of Peru the two main ranges approach one another to form the famous ‘Avenue of Volcanoes’ in the Republic of Ecuador, which borders a plateau or wide valley at a height

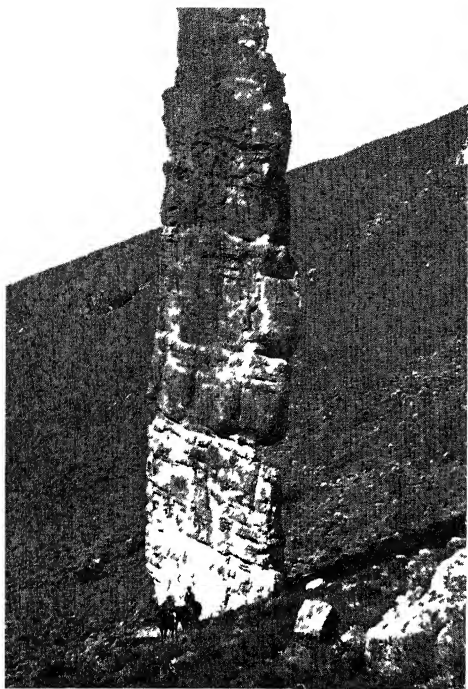


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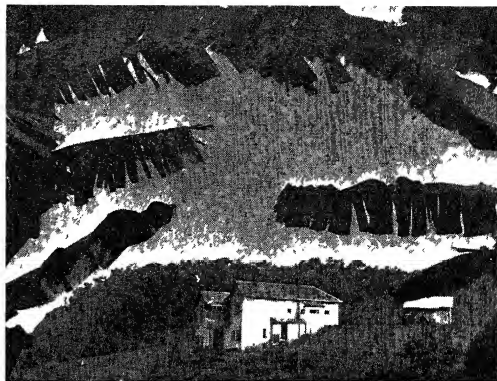
(Opposite) Architectural legacies of two civilizations in Peru on the left, examples of the Spanish Colonial style in the city of Cuzco, on the right, Machu Picchu, where a pre-Inca civilization, extinct and forgotten long before the Spanish conquest, has left imposing monuments, notably this ruined city in the Peruvian valley of Urubamba (Above) Brazilian jungle this picture, taken from the air, shows not indeed the majesty but the monotony of the Brazilian jungle and its inexhaustible stores of timber (Right) Mother and child of the Caraja Indian tribe, from Central Brazil Note the broken china worn as a necklace by the child

*Barnaby's*





*Barnaby's*



*Barnaby's*

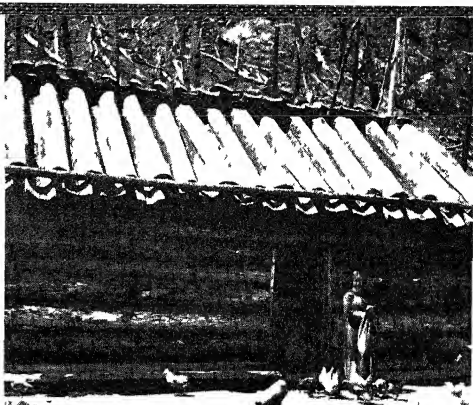
(Above) A Brazilian Government hospital in pleasant rural surroundings, typical of recent advances in hygiene and social service (Left) The Patagonian Pampa interrupted by an isolated pillar of rock, 160 feet high and likely to fall at any moment (Below) The São Paulo railway which by a series of gradients surmounts the Brazilian plateau, linking Santos with the city of São Paulo



*São Paulo Railway*



Paul Popper



Barnaby s

(Left) *The mountain valleys and uplands of Ecuador enjoy perpetual spring, fruitful in fair landscapes such as this* (Right) *Patagonian log house, with a roof of hollowed tree-trunks serving as tiles an ingenious adaptation of available materials*

of 7000-9000 feet North of Ecuador the mountains gather into a 'knot' (*nudo*)—a tangled mass of great height and complexity Thence they spread out through Colombia into three parallel ranges enclosing between them the deep and fertile valleys of two rivers, the Magdalena and the Cauca, which flow northward and unite at a distance of 200 miles from the Caribbean Sea Finally the Andes—as it were in a last titanic effort—come to an end by thrusting out a great Alpine mass into Venezuela, south of Lake Maracaibo

The Andes are the historic—almost mythological—treasure-house of the West Among their heights the Spanish conquerors found vast stores of gold and silver hoarded or utilized by Inca or Chibcha lords Then the conquerors worked for themselves, with forced Indian labour, the veins of precious metals, repeatedly increased by fresh discoveries, enriching the Spanish crown and amazing the Old World with the "Treasures of the Indies", sent in great fleets across the Atlantic Ocean And still today the Andes yield their mineral treasures chief among them gold, from Colombia, silver and copper, from Peru, tin (replacing the former output of silver), from Bolivia, but from all these countries comes a variety of other minerals

Nor is the promise lacking of a yet more opulent future The obstacles to richer development are the difficulties of access and transport through desolate mountain regions The higher mountains must remain inviolate,

inaccessible to the miner and prospector But, owing to recent advances in mechanical transport, there can be no doubt that in coming years virgin fastnesses of the Andes will be forced to yield fresh treasures, some still to be discovered, others known to exist but out of reach for example, the almost limitless deposits of silver which lie untouched beneath the surface in Peru

Two examples of South America's unsuspected wealth, one from the past, the other from our own day, support this forecast The first dates from 1545, when an Indian herdsman, climbing a steep hill on the bleak plateau of Upper Peru (now Bolivia) grasped a small shrub to aid his ascent The plant came up in his hand, and adhering to its roots were bright pellets They were pure silver Thus 'The Hill of Potosi' revealed itself, and soon became the richest and most populous place in the New World, for thousands of Indian serfs drove tunnels through the hill to bring out the precious ore and the name of Potosi became a proverb for fabulous wealth Hardly less striking is the second example, from our own times Until 1929 bismuth was not worked in Peru Less than a dozen years later Peru had become the world's largest producer of bismuth, the result not of a sudden sensational find, but of patient enterprise, and for that reason more encouraging for future advance than the story of old Potosi

Since development is in great degree a matter of policy, administration, maintenance of order and safeguarding of industry by law, the political divisions of the continent claim



attention Of the ten South American republics, seven have been already named and their positions indicated Two of the remaining three republics are the small Rio-Platenese ones which take their names from the rivers Uruguay and Paraguay, countries which are Spanish in origin and speech, like the seven previously named In Paraguay, Spanish is the language of government, press, literature and society But the vernacular is Guaraní, the Indian tongue, spoken by the peasantry and understood by all Uruguay borders on the Atlantic, Paraguay is landlocked, but seated on a navigable river with access to the sea Last of all I come to the gigantic Republic of Brazil, which spreads over almost half the continent and comprises an area greater than that of the United States without Alaska, and roughly equal to that of the nine Spanish-speaking republics put together

In order to round off the continent, it is necessary to mention the three European colonies which occupy the north-eastern corner, British Guiana, Dutch Guiana and French Guiana or Cayenne These three little countries are the only part of South America not Iberian in origin

\* \* \*

Argentina in economic outlook faces towards Europe and Great Britain and has first claim on our attention, owing to the great part there played by British investment and British activities With an area ten times that of the British Isles and a population of 13½ millions—the republic extends 2300 miles from the Tropics to Antarctic seas and forms, with Uruguay and Paraguay, a sub-continent, 'The River Plate', which differs from the rest of South America in the fact that progress here comes entirely from the soil—the products of pasture, tillage and forest, minerals counting for almost nothing The only considerable exception is the oil-field of Comodoro Rivadavia in the south, which, with some smaller wells, supplies three-fourths of Argentine home consumption Thus future development means not any new departure but continuance of the astonishing progress since the first shipment of grain sixty-three years ago Four probable lines of advance—nothing exhaustive and nothing novel—may be indicated first, more intensive tillage, second, further irrigation, which besides its earlier work in the west, has

transformed a sterile tract on the Rio Negro into a rich fruit-growing district, thirdly, increased growth of tropical and semi-tropical crops in the warm north, and last, the provision of means enabling a man to acquire permanent tenure of a moderate-sized farm on easy terms The wind-swept Patagonian steppes do not invite populous settlement A very different and less forbidding northern region, the Chaco, though rich in timber and pasture, is not a field for dense population But Argentina possesses ample space where the population may multiply, spaces marked out by soil and climate to be the seat of a great civilization of European type

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Concerning the Republic of Uruguay, which I described in a recent number of this Magazine (October 1942), a word may suffice Development here, as in Argentina, means not fresh adventures but continuance of the work done in the past and still in progress

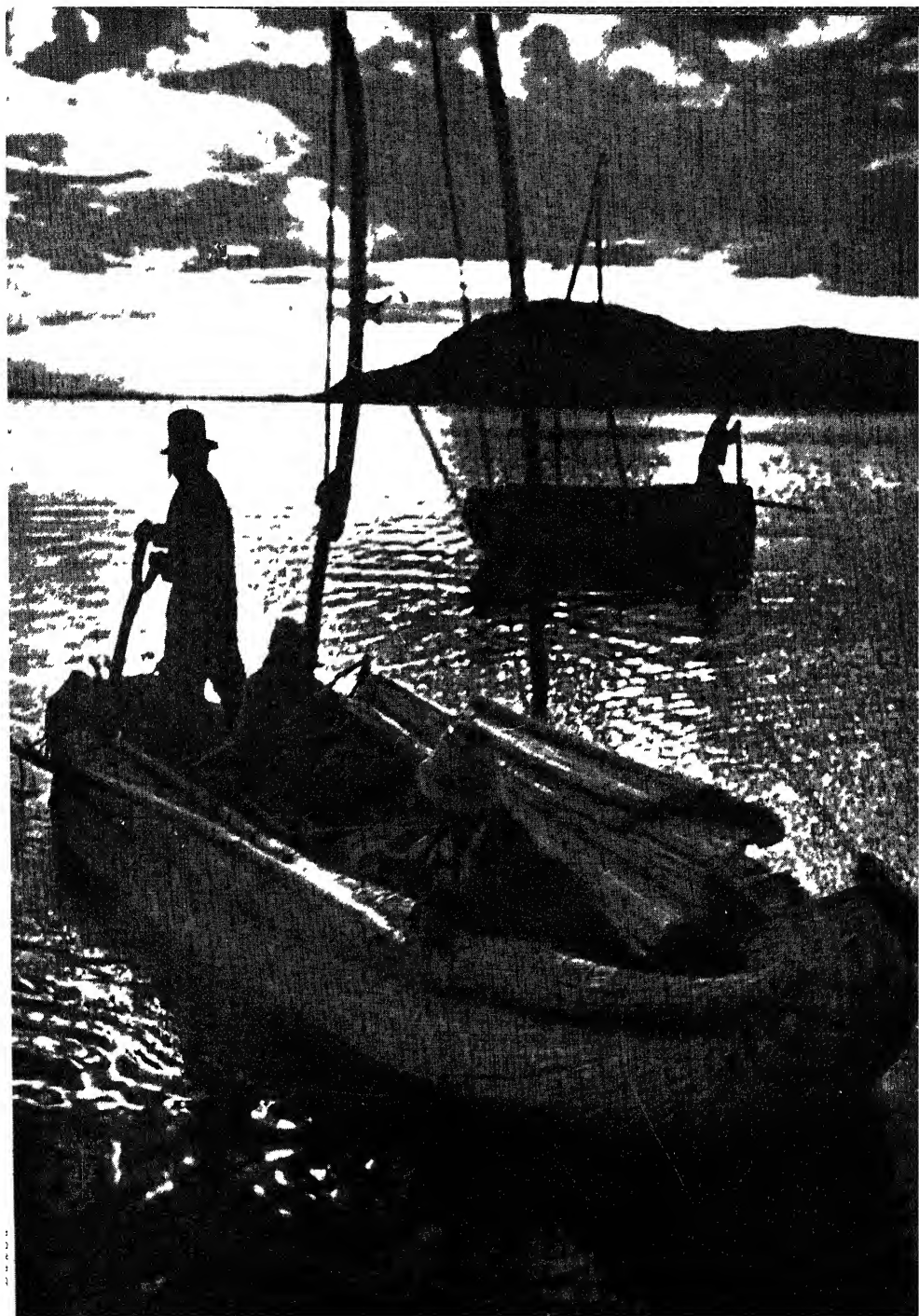
Paraguay with a million people and 160,000 square miles of good soil—predominantly forest, but also much pasture—awaits development as future need may arise Clearances in the eastern forests open up very rich agricultural land But already the country has achieved a rare and interesting development, supplying the needs of the people—mostly living in primitive condition—almost entirely by local production and manufacture, so that imports are surprisingly small Few countries are so self-sufficing

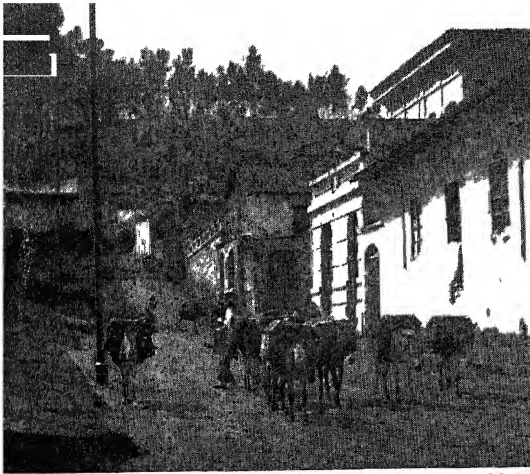
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Chile, besides its long strip of tropical desert, divides with Argentina the temperate zone of South America If the word 'undeveloped' means something backward or neglected, it does not apply to either of these countries The rich lands of Central Chile, the coalfields, the abundant and varied mineral deposits of the north, the sheep pastures of the far south, the growing factories, the water-power of the mountain streams, doubtless promise future expansion but do not invite uninformed criticism or suggestion It would be inappropriate here to make more than brief allusion to the vast estates of the aristocratic families, a topic which

*Lake Titicaca, 138 miles long, 12,500 feet above sea-level, is navigated by native Indian rafts (balsas)*







Paul Popper

finds some place in Argentina also. It should be added that a rough and unpromising southern region—partly impenetrable forest swept by summer rain from the Pacific and by winter snows—is almost unexplored. But the true ‘undeveloped South America’ lies far away, in the tropical and sub-tropical lands.

The magnificent beauty of the Brazilian capital typifies not merely the actual wealth of Brazil, but also the future riches to be won by bringing to life the dormant resources of its vast territory. “No country in the world,” wrote Lord Bryce, “owned by a European race, possesses so large a proportion of land available for human life and productive industry.” This may be amplified by quoting from a recent writer, Stefan Zweig: “Potential forces not exploited, inexhaustible reserve of resources—the development of Brazil is still in its infancy, nor can any power of imagination predict what this country, this world, holds in store for future generations.”

South of the Amazonian valley the main feature is the great Brazilian plateau, providing, within the tropics, at least a million square miles of temperate land, richly productive. Both here and in the lower lands, as transport (the main difficulty) improves, as roads, or rather rough tracks, open up new land and penetrate the forest, the soil can yield multifarious crops in tropical profusion. But besides this potential wealth of the soil, Brazil possesses valuable mineral deposits which are worked only to a limited extent. The forest contains stores of timber of many kinds, mostly untouched. Rivers, descending

*A street in the outskirts of Quito, capital of the Republic of Ecuador, a typically Iberian scene, which might easily be taken—loaded asses included—for a corner of some ancient city of old Spain*

from the plateau in cascades and cataracts, offer water-power to the unborn industries of future generations. Inland navigable waters, in great part not yet navigated, measure many thousands of miles.

\* \* \*

Here, then, in the remote Brazilian hinterland, is ‘Undeveloped South America’, lying dormant until the needs of the world gradually call it into activity. But it also extends far beyond the western frontier of Brazil. The unexploited and hardly yet explored regions lying east of the Andes are unequally divided between Brazil and the tropical Andine republics. Forests and grassy plains stretch over the vacant eastern spaces of Bolivia, further north are fertile Bolivian uplands annually flooded by the northern affluents of the River Madeira. The thickly wooded *montaña* of Peru and *Oriente* of Ecuador resemble in general the neighbouring forests of Brazil. The people of Colombia, inhabiting the Andine region and the Caribbean coastal plains, hardly realize that they possess also a great far-away land of forest and plain watered by Amazonian streams and uninhabited save by scanty tribes of savage Indians. Of Venezuela it may suffice to say that half of that country is covered by virgin forest, a “reserve of untapped resources” and likely to remain long untouched in view of the stretches of Brazilian forests which are traversed by navigable rivers.

\* \* \*

It would be rash to look for an early or rapid development of the immense interior wilds of South America. The disastrous overproduction of Brazilian coffee in past years is a reminder—if any were needed—that the difficult task of gradually reducing these wilds to the fruitful service of man must depend on an expanding world demand for the commodities there to be produced. It is also a task which requires energy, manpower and capital. At all events, here is ample scope for the adventurous pioneer and for a touch—as in the past—of “something unexpected, uncommon and bizarre”, defiant of probability and sober calculation.



*Barnaby 1*

*The small photograph shows the chessboard pattern of Buenos Aires and also a modern diagonal avenue cutting through the plan. The larger picture shows an amusing contrast, a girl on the flat roof of her home hanging out the family linen, under the shadow of a modern sky-scraper.*



*Barnaby 1*



# The Civil Wars of England

by C V WEDGWOOD

*Three hundred years ago England was a battlefield—for nearly a decade. The author of this article, who as historian of the Thirty Years War has made a special study of the warfare of the period, writes here of the geographical background and conditions of England's Civil Wars, the strategy, equipment and tactics of the Cavalier and Roundhead armies. Above are contemporary portraits of Cromwell (from a painting by Samuel Cooper) and Prince Rupert (from an engraving by William Faithorne).*

THE Civil Wars of England lasted, with one long intermission, for about nine years. It was in September 1642 that first blood was drawn in a skirmish at the village of Powick Bridge opposite Worcester on the Teme, and in September again, nine years later, that the battle of Worcester ended the war, almost in the same fields. The spatter of scars from musket balls on the south wall of Powick church tower is from the later, not the earlier, battle.

The political significance of the Civil Wars is so great that their military history has been, if not positively neglected, at least submerged. Not entirely, of course, for Cromwell's organization of the New Model Army and Rupert's famous cavalry have been obvious subjects of study. But Clarendon, the leading historian of the war, was a civilian, and few of those who fought, certainly neither of its two outstanding soldiers, were great hands

with the pen. Cromwell's despatches are brief, tough, impressive, but throw all too little light on the purely military side of the war. Rupert, a proud and silent man, neither boasted of his victories nor explained his defeats: he left the most obvious errors of Clarendon unanswered.

The Civil War is part of our political heritage, the principles for which our ancestors fought are still alive to us. It is part of the literary and romantic tradition of this country, bringing back nostalgic visions of fluttering banners and Van Dyck faces, of vain heroism and thundering cavalry charges, of stern-faced men with Bible and sword going into battle to the chanting of a psalm. And for most of us it is a part of our childhood, for who has not played Cavaliers and Roundheads? But we do not easily fit these imaginative pictures to what we know of the English countryside, and the battle-fields of

the Great Civil War remain for the most part neglected sites. Occasionally there will be a monument to some distinguished casualty—Hampden has an obelisk at Chalgrove Field, Falkland, Sunderland and Carnarvon share another at Newbury, but at Naseby the monument is in the wrong place and at Edgehill it is the wrong monument, for the grey monolith on the side of the steep slope where the trees end was erected to a soldier who fought at Waterloo.

The strategy of the Civil War in its larger aspects has not been much studied, and this is understandable for the English Civil War is a curiosity of military history with rules of its own outside the ordinary line of development. Its strategy was bound up, one might almost say swaddled up, with the social structure of the country, limited by the peculiarities of the political situation, it could not be planned according to the military rules and practice of Continental fighting, but was amenable to the brilliant manipulation of talented amateurs. It was indeed a war in which the professional soldier was at a disadvantage. Of the numerous Englishmen who had been trailing their pikes in Flanders for want of employment at home and who hurried back to fight either for King or Parliament, few achieved any real distinction, though many were efficient and experienced in the minutiae of their profession. Thomas Fairfax, a man whose sheer thoroughness and determination (he was a Yorkshireman) amounted nearly to genius, and the brilliant, unstable George Goring were perhaps the only two professional soldiers who made any significant mark. More often professional ideas interfered with the freedom of invention and action which English conditions offered, and once at least the cocksureness of a professional caused disaster when Colonel Hurry, fresh from the battle-grounds of Germany, drew up the cavalry on the right wing at Marston Moor in the highly complex Swedish fashion with the musketeers between the horse, a formation equally unsuited to their training and the terrain on which they were fighting.

It is significant that the two men who best understood and exploited the situation were both, if not exactly amateurs, at least beginners in their profession. Cromwell knew nothing whatever of warfare before he acquired his captain's commission in the summer of 1642, and Rupert, although he had served in the Netherlands and Germany, as a ranker in the Prince of Orange's life-guard and later as an officer, had spent his last four years as a prisoner of war when, at

the age of twenty-two, he was appointed Lieutenant-General of the King's Cavalry. Cromwell was therefore too ignorant and Rupert too young to be bound by the accepted rules.

The civilian population, too, was ignorant of the rules. No war had been fought in England for a century and a half and the attitude of a fat and prosperous people, used to orderly government, was very different from the embittered, helpless resignation of the German and Flemish peasantry. Foreign towns knew only too well the blackmail of *Brandschatzung*—the indemnity which the General of an occupying army demanded in return for preventing the sack of the town, English towns had never heard of such a thing, and when Rupert, assuming the existence of the custom, exacted a sum from Leicester, great was the indignation of the city fathers, and great the speed with which King Charles ordered his nephew to pay it back. It was the first rule of continental warfare which had to be unlearned in England, for here each side strove not to terrorise, but to pacify and win over the civil population.

Whence, among this peaceful people, arose the armies which appeared with such terrifying speed in the summer of 1642? England had an antiquated system of defence, the local levies. These hastily mustered yokels were almost entirely untrained, and although provision was supposed to be made for their equipment, very little was ever to be had, a few old pikes with a helmet or two of an Elizabethan model were often as much as could be found for them.

London had its trained bands who had been exercised occasionally in the handling of pikes on fine summer evenings. The King, fearing trouble with the people, had created a small life-guard shortly before the outbreak of the war. For the rest both sides relied on troops of volunteers raised by wealthy or patriotic gentlemen who defrayed the expenses themselves, recruiting the men on their own estates and arming them according to their own caprice. If they chose to equip them with battle-axes or bows and arrows—and on occasion we find both of these antiquated weapons in use—to tie coloured ribbons on their shoulders or encase them from top to toe in armour—as did Sir Arthur Hazelrig with a regiment immediately nicknamed the 'Lobsters'—no one was going to stop them.

The armies of both sides, therefore, presented a motley appearance. Some were too much armed, some were not armed at all, there was uniformity neither of equipment nor

dress Some wore red, some wore blue, some undyed cloth—they would dye it in the blood of their enemies No definite mark distinguished the King's men from Parliament's Officers of the Royalist forces wore red sashes, Parliamentary officers orange, but it is not to be supposed that the supply of sashes was at first equal to the sudden demand, nor that the reds and oranges hastily bought up or fished out of the oak chest by a thrifty wife did not vary through every shade, and approximate inconveniently to each other Mistakes between friend and foe were frequent and often bloody A further confusion was added during the opening phase of the war by the Parliamentarian habit of referring to the Royalists as the 'rebels' and themselves as the party of King and Parliament (One remembers Hampden's device Not against the King I fight, but for King and Commons' right) Some enthusiastic French gentlemen who had hurried over to England to defend their countrywoman, Queen Henrietta Maria, enlisted in error under the wrong flag

As well as the victims of such strange misunderstandings there was a fluctuating fringe of professional soldiers who changed sides to suit themselves, some were Scots or Irish mercenaries, some Englishmen, one or two came from further afield, like that Croatian Captain of whom John Aubrey tells, who openly declared, "I care not for your cause but for your half-crowns and your handsome women"

To the professional trained abroad there was no dishonour in changing sides The arrangement was a business contract, and an officer who resigned his commission in one Continental army was wholly at liberty to take up a commission in another when he wished Whole regiments shifted from side to side during the Thirty Years War with no one thinking the worse of them But in this matter the English war proved to be different We hear significantly much of prisoners There was a concentration camp for Royalist soldiers at Coventry, and atrocity stories were told of the sufferings of Parliamentarians in Oxford Castle and of the King's men lodged in the hulks of moored vessels in the Thames As for the Royalist officers, the Tower of London had rarely been more fully, or more gaily, populated

When flowing cups run swiftly round  
With no allaying Thames,  
Our careless heads with roses bound  
Our hearts with loyal flames

The question of prisoners was one on which the rulings of the foreign-trained professionals were an inadequate guide in the German

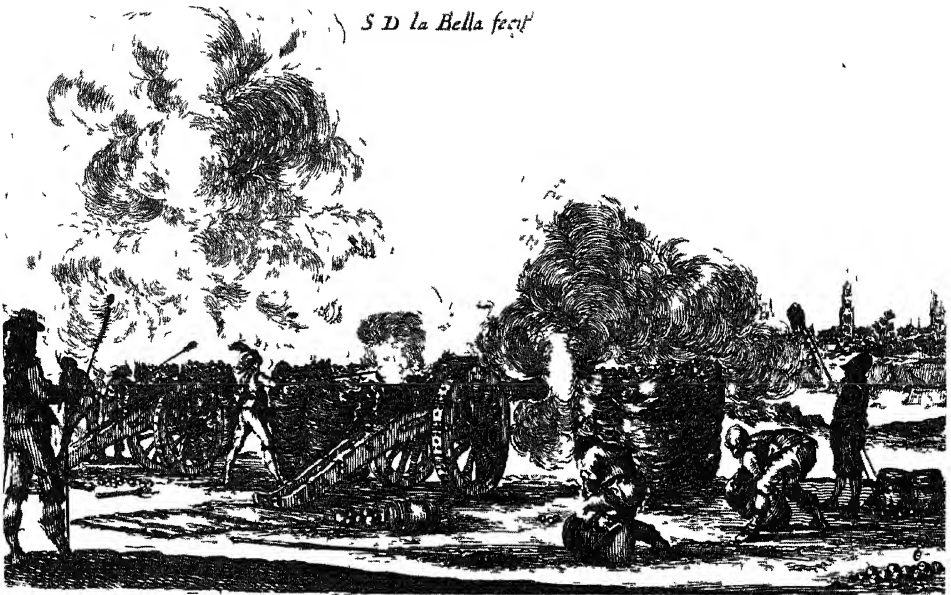
Wars large numbers of prisoners were not taken, the defeated were simply absorbed into the army of the victor But the English quaintly regarded changing sides as dishonourable, it might be done but never with credit "Walter Baskerville," we read in the contemptuous jottings of a Royalist soldier, "first for the Parliament, then for the King, then theirs, then taken prisoner by us, and with much ado he gott his pardon and now *pro rege*, God wott"

In other ways, too, the spirit of the English forces was peculiar to these islands The rank and file, recruited from the peasantry from Wales, Cornwall, West Yorkshire, Lancashire and Cheshire on the King's side, from the eastern and the home counties on Parliament's, shared a strong spirit of individualism and independence We speak loosely of the survival of 'feudalism' in England, thinking of our ancient landed gentry and the sentiments of loyalty and obligation between squire and tenantry, but we forget that in fact feudalism in its final form never developed in England, and the last vestiges of anything which a man from the Continent would have called feudal had vanished a century before the Civil War No English landowner had rights of life and death over his people, few, if any, English peasants were rigidly bound to the soil The troops which followed the standards of their local gentry were, taken by and large, more humane, more civilized, more reasonable than their counterparts abroad But they were also more stubborn, more argumentative and, until they had commanders who understood them, less trainable Added to this, some of them took a stand on their rights and could not be gainsaid

The men of the local levies refused to fight outside their own counties, which was indeed one of the presumed conditions of their service, and it was only with extraordinary persuasion that Sir Ralph Hopton managed to bring the Cornish infantry—the finest in the Royalist army—out of its native duchy, nor in spite of a plan of campaign which was intended to end only in the recapture of London, did this particular section of the King's army ever appear further westward than Devizes, where at Roundway Down they had the pleasure of tumbling Sir Arthur Hazelrigg's ridiculously encased 'Lobsters' down one of the steepest chalk slopes in the Wiltshire downs

A further problem in discipline and organization was set by the gentlemen volunteers, who although only a sprinkling of the whole army and usually grouped together into a troop, were a perennial





*By courtesy of the British Museum*

*Seventeenth-century cannon bombarding a town, from the contemporary etching by Stephano della Bella  
The wicker screens between the guns were earthed up to provide cover for the gunners*

obstruction to discipline. The gentry of England knew nothing of war—again how un-feudal!—and carried both their pleasant manners, their social distinctions and their strong individuality into battle. At that time nobody was brought up on the military doctrine of “theirs not to make reply, theirs not to reason why.” They answered back and reasoned why in and out of season, with the utmost nonchalance. What a world of obstructive young subalterns is conjured up by the ingenuous tribute paid by Waller to Cromwell, who, as a junior officer, “did not argue upon his orders”!

After more than a century of peace England was naturally behind Europe in her armaments, a fact which for once did not matter, since no foreign nation was involved. The demand for arms in the opening months of the war far outran the supply, and officers coming back from abroad must have laughed to see the antiquated pikes and Elizabethan helmets in the ranks of both armies. Everything was in short supply. Birmingham manufacturers, cashing in on the King’s necessity, put out a line in cheap swords, for a consignment of which Charles contracted, until Prince Rupert, raging over hundreds of

snapped weapons, threatened to resign if his cavalry were issued with any more “Brum-magem blades.” English pistols too seem at first to have been oddly unreliable: they would go off suddenly, backwards, or misfire altogether. Or perhaps they were only mis-handled by amateur soldiers. Prince Rupert, a singularly striking target and frequently the object of deliberate attentions, got through the whole war with nothing but a graze on the shin-bone, which suggests a low standard of aiming. It was poor Sir George Lisle, facing the firing squad after the surrender of Colchester, who called to his executioners to come closer, and when they would not, pleaded, “Friends, I have been nearer you when you have missed me.”

Heavy artillery played a larger part than has generally been allowed. It was of inestimable value in sieges, and the Civil War was a great war of sieges. Transport was a perennial problem, for the cannon were enormously heavy for their power, would stick in the muddy roads holding up the progress of an entire army, and as often as not leave a wheel behind them when forcibly hauled out. Yet, in spite of the difficulty of transport, guns were used conventionally in

the Continental manner in pitched battle, where they pounded away to very little effect before the opening of the action. When Cromwell in 1648 left his entire artillery behind while he raced in advance to cut off the Scots Royalists at Preston, he was sacrificing superiority in armaments to speed and surprise in a way which a conventional soldier of the time would have thought absurdly dangerous. His decision was fully justified by the event.

But in siege warfare the cannon were really important, and indeed the King's weakness in this important arm was certainly one of the factors in his defeat. The battering power of the big culverins and demi-culverins, twenty-pounders and twelve-pounders respectively, at close range—about 300 yards—was terrific. A sustained bombardment would smash down the average city wall effectively enough for the besiegers to fight their way in, and comparatively few cities failed to surrender after a serious bombardment.

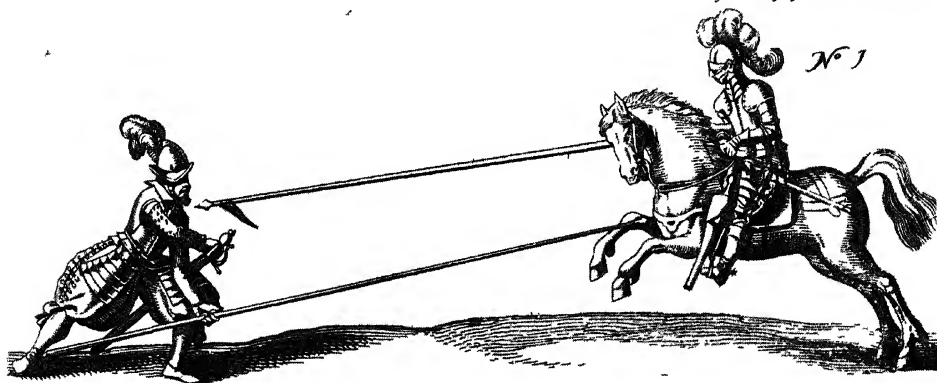
Banbury was an outstanding exception, for here the Royalist colonel, Sir William Compton, a boy of nineteen, kept the garrison working in shifts day and night throwing up an earthwork behind the outer wall until, after fourteen weeks' resistance, he was at length relieved. Colchester, in 1647, surrendered not so much to hunger as to superior artillery. The batteries of the defenders gave out for lack of ammunition and Fairfax was able to move his heavy guns into a position from which they could have raked the town Gloucester, besieged by the King in 1643, held out until the trained bands of London,

in a fervour of devotion, marched across the Cotswolds to its rescue, simply because the King had not enough ammunition for his guns, and so could not smash his way in. The capture of Waller's guns at the otherwise small skirmish of Cropredy Bridge turned it into an event of importance to the King, and it is notable that at the second battle of Newbury Prince Maurice carried out an elaborate and dangerous manoeuvre in order to secure the King's artillery, first collecting the guns into Donnington Castle and posting a guard over them, then retiring to Oxford, collecting reinforcements and making a lightning advance across the Berkshire downs by night to Donnington, to convoy the guns safely back into Oxford. Not for nothing did the Parliamentarians call Maurice, Rupert's less spectacular brother, the "good come-off".

The musket was the most important fire-arm in general use in the 17th century, and the musketeers were a class apart, the aristocrats of the infantry. In England, a country even in those days of ditches and copses, and deep lanes fringed with hedges, a skilful captain could do wonders with a handful of musketeers. We find them lining the long hedge on the Royalist right flank at Naseby field, preventing Fairfax from manoeuvring his army or outflanking the King. We find them contesting the transverse hedges and orchard walls in the first battle of Newbury, an engagement which was not so much a pitched battle as a crossword puzzle of single skirmishes in the enclosed market gardens and orchards on the outskirts of the little town. When during this battle Falkland, the King's

(Below) *Illustration from a Dutch manual of infantry drill, showing the correct position of the pike in defensive action. (Opposite) Donnington Castle, near Newbury, whence Prince Rupert's brother Maurice rescued King Charles I's artillery after the second battle of Newbury.*

*By courtesy of the British Museum*



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Packer

(Above) Chastleton House, where the Royalist owner hid after the battle of Worcester, his wife having drugged his pursuers, he escaped while they slept. The proximity, seen here, of a house to a church with a tower suitable for use as a gun emplacement, is a characteristic of the English landscape that caused the surrender of many Royalist garrisons in isolated country houses. (Below) Edgehill, taken from approximately the centre of the King's position.

Herbert Falton



Secretary of State, tired of a conflict to which he saw no profitable end, rode his horse at a gap in one of the hedges, he knew that there would be musketeers on either side to pick him off, and accordingly found the death he sought. At Langport, where George Goring made the last serious stand for the King against the triumphant Parliamentary advance into the West in 1645, he held the ridge above the town by infesting the narrow lane which was its only access with the main strength of his musketeers. A narrow English lane, covered by musketry fire, was a death-trap to incautious cavalry. But Fairfax threw in the whole strength of his infantry to fight the Royalists back, foot by foot, at push of pike, from the knotted thorn trees and the high banks.

In hand-to-hand contest it was push of pike which ultimately decided the issue. And the pike, for all its simplicity, was an effective weapon when skilfully handled, both in attack and defence. The Continental pikeman could withstand, or at least break the impetus of cavalry attack, the attitude of defence was a lunge, the butt end of the pike resting against the instep of the hinder foot, the shaft steadied against the bent forward leg. In this attitude the skilful pikeman could fend off attack with the point of the pike controlled by the left hand, and keep his right hand free for sword play.

Could the London trained bands have done anything so complicated? One rather doubts it. As for the country levies, they found other uses for their pikes—when they had them. They were convenient for flicking the fruit off orchard trees, for hooking a new shirt from a housewife's line, they could be turned to account for hanging up a cooking-pot, punting a ferry across a stream, or even for chopping wood. "I cannot conceive what these fellows are doing with their weapons," grumbled Sir Ralph Hopton when yet another batch of infantrymen reported irrecoverable damage or loss.

The general strategy of the Civil War is obscured by innumerable local quarrels. Parliament strove from the outset to coordinate its supporters into associations and groups, of which the most important was the Eastern Association from which sprang Cromwell's army and the ultimate reorganization of the New Model. The King, paradoxically, diffused his energies and played up to local magnates in order to gain widespread support and undermine his opponents throughout the country. In pursuit of this system he fatally dispersed his energies, for by garrisoning isolated country houses he reduced the effec-

tive strength of the army which he was able to put in the field, and in the end the Royalist war came to an end in a series of heroic and useless resistances before, one after another, the fortified manors and fair country seats hauled down the royal standard. Some, like Basing House, fell only to assault and paid the penalty in the blood of the defenders.

One peculiarity of the English landscape assisted time and again in the reduction of these improvised fortresses. This was the position of the village church, so often within a stone's-throw of the manor. With its strong square tower the typical village church made a convenient station for a gun, by the threat of which the neighbouring house would be driven to surrender.

Before the King's main army was broken at Naseby and the isolated garrisons successively reduced, many had been the local fights and skirmishes between the small forces in these outposts and Parliamentary troops passing through the country. In the same way, though not so frequently, nests of Parliamentarians recruited and held together by local magnates molested passing Royalists, and in some stretches of country which saw none of the serious fighting, local jealousies and local quarrels kept up spasmodic disturbance.

The main strategic outline of the war is, nevertheless, plain enough. The chief strength of Parliament lay in the south and east, of the King in the north and west. He unfurled his standard at Nottingham, the most southerly point at which he could cross the Trent, in August 1642, struck south across the midlands collecting his forces, intending to march at once on London. The Parliamentary army under Essex barred his way below the sharp ridge of Edgehill in Warwickshire, but was sufficiently damaged in the action which followed on October 23 to make an immediate march on London and the capitulation of the city something more than a possibility. But Charles hesitated fatally and by the time his advance guard reached Turnham Green—the main strength of his army carrying Brentford by assault—the trained bands had come out to stop him and London was in a state of defence, with chains and barricades across the city streets and the Bowling Green at Hyde Park Corner the pivotal point of a system of outer defences of earthworks and batteries.

The King, however, decided to fall back no further than Oxford, thus making his headquarters at the apex of a triangle, of which the bases were in Lancashire, Wales and the South-West, extending forward into



*Val Doone*

*Gloucester, showing the exposed position of the town encircled in hills. Besieged by King Charles in the summer of 1643, it was relieved by the London Trained Bands in a spectacular march across the Cotswolds*

enemy territory. The Chilterns, with their steep north-westward face against the King, were to prove an insuperable barrier to any bold frontal attack on London, the town of Reading, in the only practicable gap, was bitterly contested, changing hands four times in the course of the war. The strategy planned by Prince Rupert for the reduction of London during the following year 1643, was the separate advance of the King's forces from the north and west in a pincer movement which was to converge on the estuary of the Thames just below the capital. He did not believe that this port and merchant city would hold out in the face of a threat to its very life-blood, the sea-ward approaches. He was probably right, but the plan came to nothing owing to the difficulty of moving the armies so far from their recruiting grounds. The men of the western midlands would not advance on London while the Parliamentary stronghold of Gloucester remained unreduced

in their rear. The west country men feared with equal reason the raiding of their homes and fields by the Parliamentary garrison which still held Plymouth, and the town of Kingston-upon-Hull was a menace to Yorkshire. The King's two fatal weaknesses prevented him from reducing any of these three cities. He failed at Gloucester for lack of artillery, and at Plymouth and Hull because such navy as there was had declared for Parliament, and kept the garrisons re-victualled from the sea.

In the following year, Rupert attempted to save the situation by a double preliminary campaign for the reduction of all subsidiary Parliamentary forces in the west and north before the march on London. The western campaign succeeded with the surrounding and surrender of the Earl of Essex, but the northern campaign ended in disaster at Marston Moor on July 3, 1644. It was a pitched battle which Rupert had not intended to





Parker

*Compton Wynnyates, whence the Royalist owner, in a ferocious night battle, vainly tried to oust the Parliamentarians (Below) The flat plain of Marston Moor, sparse hedgerows and ditches provided almost the only cover*

Hill F Taylor

fight, and which was forced on him because Charles's military advisers in Oxford feared that the city might be attacked if the absence of the army were prolonged. In the circumstances one cannot but feel that the choice of so exposed and indefensible a site as Oxford for his headquarters was a disastrous handicap to the King.

The loss of the north was fatal to Charles's hopes. Moreover the Parliamentary army had now been reorganized under Fairfax and Cromwell. The strength of the Royalist army was annihilated at Naseby in June 1645—another pitched battle which Rupert had disadvised—and the final mopping-up of the King's scattered garrisons was merely a matter of time and patience. Attempts on the part of the King to stabilize a front further to the west, along the line of the Severn and behind the Cotswolds, with his headquarters at Worcester, failed completely. His last army from the midlands and Wales was sur-



rounded and capitulated at Stow on the Wold in March 1646, his last western army at Truro a week earlier.

Parliamentary strategy, for the first part of



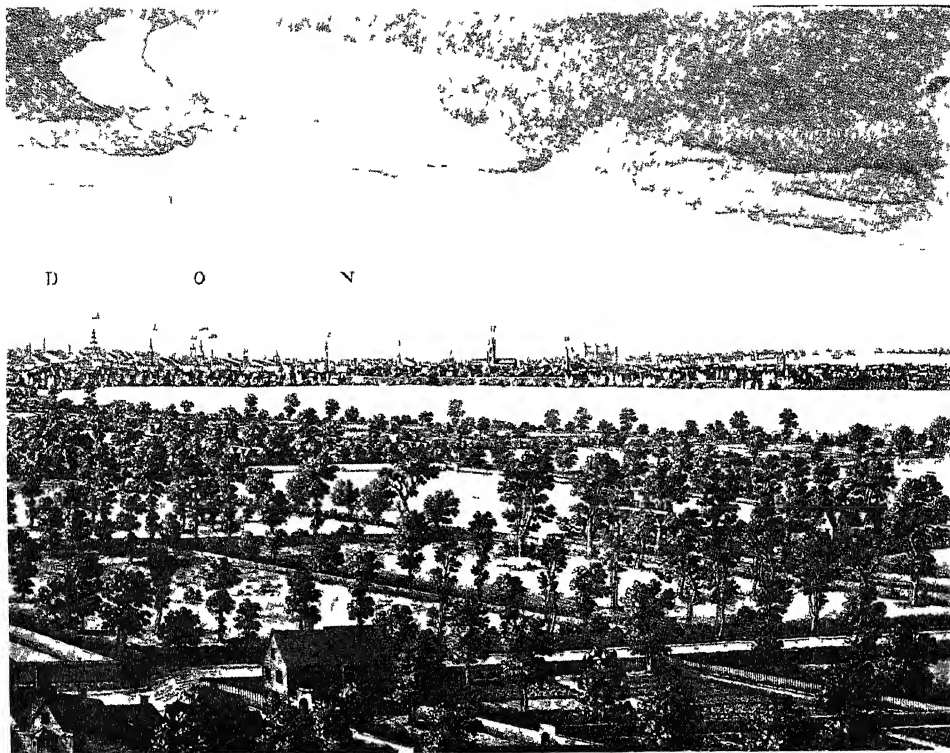
Stanford London

the war, being purely defensive, was less interesting. It was also uninspired. In fact the Parliamentary side produced no strategist of the stature of Rupert. What it had was a superb tactician in Cromwell. Cromwell realized that until Parliament had cavalry which could outmanoeuvre Rupert's they would never be able to pass from defence to attack, and he set himself to develop that cavalry methodically, with infinite patience, making of his heavy-armed, perfectly disciplined, but swift and mobile Ironsides the model for the cavalry of the New Model Army.

And indeed when we think of that war, of the English countryside alive with the troops of the 17th century, it is always of the cavalry that we think. For the whole conformation of the land cried out for the exploitation of this arm. The wide stretches of unfenced common land, the huge sweep of the Wiltshire and Berkshire downs, the innumerable dents and hollows, rises and depressions of the midlands, made it the perfect country for cavalry fighting—not for pitched battles between charging squadrons of horse, although that might come in, but for skirmishing and raiding. It was the sort of country in which a small number of cavalry, cleverly used, might baffle, divide and defeat far larger forces. Which was precisely what Rupert, left to himself, was perpetually trying to do, as when dodging with lightning speed across the Yorkshire dales he drew the besiegers off from

York and slipped in to the relief of the city from the north, while Fairfax was still looking about for him on the western side. Moreover, cavalry had another advantage for these ill-provided armies, since horse and man could themselves be used as a weapon. Continental cavalry was armed largely with pistols and until the time of Gustavus Adolphus the method of the charge was to halt within firing distance of the enemy, discharge the pistols, and immediately wheel and re-form to charge again. There was no actual contact with the opposing force. Gustavus introduced the terrifying method of charging without a halt straight into the ranks opposite, firing only at the last minute. Rupert, whose troops, as we have seen, often had brittle swords and no fire-arms at all, taught his men to rely almost entirely on shock and impact. He turned horse and man into projectiles, and both at Edgehill and Naseby simply rode down the opposing ranks until they panicked and fled. Cromwell copied and developed the method, improving the armour and equipment of his troops until the impact of the Ironsides became like the impact of so many miniature tanks. Sheer weight drove them through the enemy.

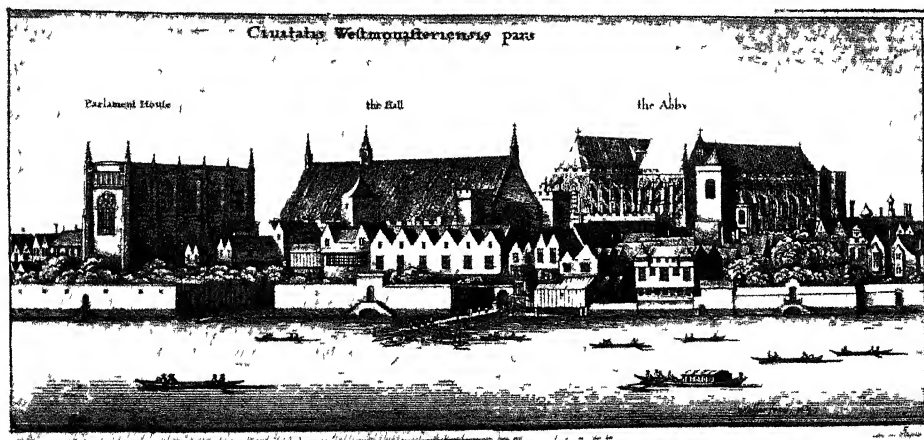
Just as the English open country was specially suited to the swift and free movement of small bodies of cavalry, so the hedged lanes, the ditches and the banks gave special opportunities to the musketeers. In contrast to the wide scope of cavalry action were the many congested engagements fought out between infantry in the built-up and enclosed outskirts of many a quiet English town, or even in the outbuildings of some large manor-house. When the owners of Compton Wynyates attempted to recapture their house, fortified against them by the Parliamentarians, the outer wall of the park, the inner garden wall, the stable yards became the successive points of a frantic and embittered defence. In few wars can there have been quite so many actions in narrowly enclosed spaces or improvised strong-points. The country had few fortresses in a condition of readiness, so fortresses must be made as occasion demanded and offered. In one church at least, Alton in Hampshire, a band of trapped Royalists defended the length of the nave pier by pier, barricading themselves behind pews and tables, surrendering at last on the chance steps. The conversion of Lichfield Cathedral into a fortress was a more deliberate act, for the Cathedral dominates the town, twice defended it was twice taken, and a great part of its fine red-sandstone Gothic destroyed in the process.



From Hollar's Views of London by A. M. Hind (The Bodley Head)

(Above) The outskirts of London, south of the river Hollar's detailed engraving shows clearly the square fields, fences and hedges always to be found in the neighbourhood of cities in the 17th century (Below) Westminster at the time of the Civil War the Houses of Parliament on the left Notice the landing-stage and the passenger traffic on the river

From Hollar's Views of London by A. M. Hind (The Bodley Head)



The English climate has not altered very much in three hundred years. Naseby was fought "about the noon of a glorious day in June", but Naseby was exceptional. The summers of the Civil War were typical summers, "a blustering cold day, and the evening very wett", or some equally depressing entry, is found time and again in the notes of contemporaries. That particular blustering cold day was in August. One can sympathize too with the Musketeers who were to "go resolutely forth by Sallies, in a dark, cold, blustering, rainy, tempestuous night". We all know such nights. But the climate was not subject to great extremes and therefore we hear less than we do in Continental fighting of the formal business of going into winter quarters and abandoning further manoeuvres until the spring. If the larger movements of the war were, as one would expect, seasonal, there was intermittent fighting almost continuously. Ice was on the ground in some parts of England in the August of 1642, but the winters themselves were for the most part mild and muggy.

The Civil War was the last prolonged or serious war to be fought in England itself,

and centuries of peace have wiped away the scars. Here and there an ancient helmet or a pair of rusty spurs hang in a local museum, here and there a church wall is scarred with small shot, an ancient font carries the scratched initials of the soldiers who camped there, or a country house will preserve the story of some private act of heroism, by oral tradition, like the story of Arthur Jones's wife and her cool deluding of the Parliamentary soldiers to save her husband's life, which is handed down at Chastleton.

It is hard to see Turnham Green or even Newbury as once they were, and Wigan is no longer the "pretty village" through which Prince Rupert rode after his relief of Latham House, yet you may trace Cromwell's position with tolerable certainty on the rolling fields of Naseby and follow his brilliant manoeuvres on the bald expanse of Marston Moor, or, walking the by-roads of England—for the battle-fields of the Civil War are essentially a walker's hobby—see suddenly that trivial hillock, this unimportant brook re-endowed with the terrible significance of some brief and bloody afternoon three hundred years ago.

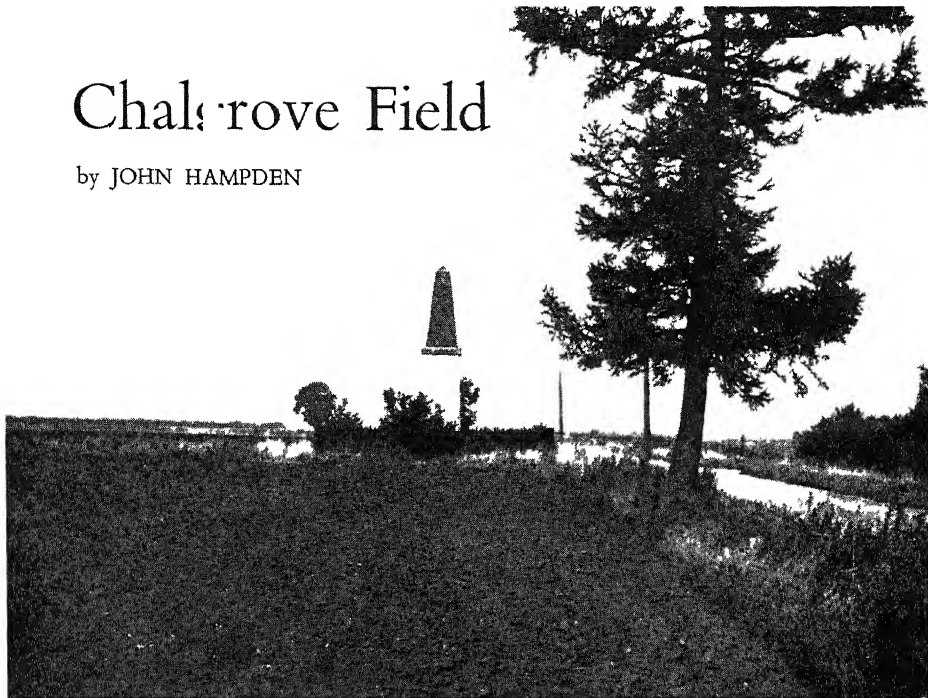


*Rischgitz Studios*

*Lichfield, from an old print, showing the dominating position of the Cathedral. Used as a fortress, the central spire was destroyed and the west front heavily damaged.*

# Chalgrove Field

by JOHN HAMPDEN



*Mr Hampden has for some time been collecting information about the life and home environment of his great namesake, the Roundhead leader and champion of Parliamentary rights, the tercentenary of whose death after a skirmish with Royalist forces on Chalgrove Field is commemorated in this article*

FROM the broad shoulder of Watlington Hill, which our National Trust has now taken into safe keeping, one looks west and north over one of the most serenely beautiful landscapes in England, which can have changed little in the past 300 years. Between the chalk ramparts and ancient beech-woods of the Chiltern Hills, guarding the approach to London, and the limestone plateau of Cotswold on the horizon, lie the level pastures of the Oxford clay, a hedged chequer-board of brilliant green meadows broken by occasional fields of brown earth, scattered trees, and the red brick and red tile of farmstead and village.

When Colonel John Hampden of the Buckinghamshire Foot last came to Watlington on Saturday, June 17, 1643, he had little leisure, but nevertheless he may have climbed the Hill to survey afresh, in his new vocation of soldier, the countryside he already knew so intimately. It may well be that he sat that

afternoon by the naked chalk of the ancient Watlington Mark and looked out over a scene, set for the trial by arms of the cause of English liberty, which was also a map of much of his earlier, happier life.

Behind him, in Buckinghamshire, lay the wide estates centring upon Great Hampden which his family had received from Edward the Confessor. In the Oxford plain, to the north, lay Thame, whose broad street was as familiar as his own home, for he had followed the family tradition by spending some years as a boarder at the Grammar School. To the north-east, eyes younger than his might just discern, or fancy they discerned, the tower of Magdalen College, Oxford, where for three years he had begun to acquire his considerable knowledge of history, before moving on to the Inner Temple to study law.

Below Watlington Hill, two miles away and almost hidden among its trees, lay Pyrton,



The Chalgrove country, from a map in 'The Natural History of Oxfordshire', by Robert Plot, Oxford 1677. It will be noticed that the roads are not marked. (Below) Portrait of John Hampden from 'Some Memorials of John Hampden', by Lord Nugent, published in 1843.



where the marriage register still shows the entry "John Hampden esq of Hampden, & Mts Eliz Simeon, d of Mr Edmond Simeon of Pirton, 24 June 1619". The Norman chancel arch and medieval porch of the little church, the dark yews, the beautiful Elizabethan manor which the Simeons held, are still much as they were on that Midsummer Day of the wedding. But for Hampden in 1643 the memories of Pyrton shone from a land of lost content, for his beloved Elizabeth had been dead nine years, and three miles beyond Pyrton were the wide unbroken levels of Chalgrove Field, which marked for him the active beginnings of hateful civil war. There in the previous August he had set up a standard bearing Parliament's device and his family motto, *Vestigia nulla retrorsum* (Not a step backward), and mustered the 20th regiment of foot, soon to become one of the best in the service of Parliament and known as the "Buckinghamshire Greencloaks" from the green livery of the Hampdens.

On June 17, 1643, Watlington, Pyrton and Chalgrove lay between Cavalier and Roundhead, the armies of King and Parliament. Charles I was at Oxford. The Earl of Essex





*By courtesy of Major Ducat Hamersley*

*Pyrton Church and Manor, from a drawing made before the 19th century 'restorations' Here John Hampden married Elizabeth Simeon of Pyrton Manor on Midsummer Day, 1619*

who had taken Reading from the Royalists on April 27, had removed his headquarters to Thame on June 10. The antagonists faced each other uncertainly, for on neither side was there a skilled and resolute command or a strategic plan. Hampden was profoundly uneasy. If indeed he surveyed the countryside from Watlington Hill he may well have looked longest to those scattered outposts which Essex had set up at Tetsworth and Postcombe on the Oxford-Wycombe road, and at Chinnor and Watlington below the Chilterns. These were his immediate anxiety because they were so obviously exposed to any sudden raid by the Royalist cavalry under Prince Rupert of the Rhine. Any such raid must cross the River Thame, and Essex held the Wheatley bridgehead to the north, but only four miles beyond Chalgrove and less than seven from Oxford was Chiselhampton Bridge—unguarded. It was an open invitation to Rupert, whose impetuous daring as a cavalry leader had already been amply proven.

Essex held the supreme command, and there was little Hampden could do. He was all the more scrupulously loyal because he

knew of the agitation to put him in Essex's place. He had never sought fame or advancement. He had never sought war. But he was among the few on both sides who realised from the first that this war could not be ended by negotiation and that no war can be won by hesitating to fight it. "he threw away the scabbard when he drew the sword." And he could not help knowing how men looked to him. Early in his Parliamentary career, which began in 1621, he became associated with the growing opposition to the dictatorial claims of the King, and after his famous refusal in 1635 to pay twenty shillings as Ship Money, on the ground that the King had no legal right to levy it, his influence was second to no one's except John Pym's. "Then he grew the argument of all tongues," wrote the Royalist historian, Clarendon, "every man inquiring who and what he was that durst at his own charge support the liberty and property of the kingdom [and when the revolutionary Long Parliament began] the eyes of all men were fixed on him as their *Patruæ pater*, and the pilot who must steer their vessel through the tempests and rocks that threatened it. And



Will F. Taylor

*The Ickneld Way, near Chinnor a prehistoric 'Green Lane' which here runs along the foot of the Chiltern Hills*

I am persuaded his power and interest at that time was greater to do good or hurt than any man of his rank hath had in any time for his reputation for honesty was universal and his affections seemed so publicly guided that no corrupt or private ends could bias them." When the statesman turned soldier in 1642, at the age of forty-eight, he showed himself again the born leader of men, with great physical courage. Characteristically he disclaimed military ability, but in this matter of the outposts he was, not for the first time, proved tragically right.

On that same Saturday afternoon, Rupert rode out from Oxford over Magdalen Bridge with some two thousand horse and foot. His guide was Colonel Urry, a Scottish soldier of fortune who had very recently changed sides and brought to the Royalists not only full information about the outposts but (most probably) the news that a treasure train was on its way that week-end from London to Thame, with £21,000 for the payment of Essex's troops. Before dark the arches of the

ancient bridge at Chiselhampton echoed to the hoofs of the Royalist cavalry, as now they echo to the Bren-gun carrier, but thereafter the raiders made only cautious progress. Striking across country from Stadhampton to the Wycombe road, they passed through Tetsworth at one in the morning, Rupert giving orders that the fire of the Parliamentary guard was not to be returned. At Postcombe two hours later there was a brisk skirmish, with casualties on both sides, and they made better speed across the fields to Chinnor, which they surrounded before dawn. There two hundred dragoons of the Bedfordshire Regiment, weary raw recruits, were surprised asleep and nearly all killed or captured in their shirts. But by this time the alarm had spread. The 14th-century church, which is still Chinnor's pride, was lit by burning houses which beacons the countryside. Word came to Rupert that the treasure train had taken refuge in the Chiltern beechwoods, where it would be hopeless to follow, and he was only four miles from Thame. So,

says a contemporary Oxford pamphlet, "His Highness commanded away to horse, bending his march homewards all along under the ledge of hills to the south and south-westward. But yet on purpose with so slow a march that the Rebels (if they pleased) might have leisure to confront him. And so it happened."

John Hampden had slept the night at the old (not the present) 'Hare and Hounds', in the comely little red-brick town of Watlington. News of the raid came to him early that Sunday. He had no force of his own, but he joined a troop of horse under Captain Cross, which mustered more likely than not outside the ancient 'Barley Mow' where now the Home Guard musters on Sunday mornings. Hampden, and others, must have realized at once that if the Royalists could be delayed until a strong force from Thame reached Chiselhampton, Rupert would be killed or taken, and the war half won. But whether Essex could be persuaded to act promptly was another matter.

At nine o'clock, with considerable Parliamentary forces closing in from Easington and Thame, Rupert called a halt in the great cornfield of Chalgrove, and sent all his infantry "to lie on both ends the bridge" and prepare an ambush along the lanes leading to it. But he did not draw the pursuers into the ambush, for his rearguard was already suffering casualties and suddenly he lost patience. "Yea (saith he), their insolency is not to be endured." Turning his horse, he set spurs to it and, alone, leaped the long hedge beyond which the Roundheads were mustering. His life guards followed, and then the rest of his force as best they could. The Roundheads met them gallantly. "To say the truth", says the Oxford pamphlet, "they stood our first charge of pistols and swords better than the Rebels have ever yet done", but Rupert's men not only had the advantage in numbers, they were better cavalry, better led. Taken in the front and on the flank, the Roundheads broke and rode for their lives, leaving perhaps fifty dead among the corn.

It was then, apparently, that Hampden came upon the field, bringing up reinforcements from Warpsgrove and rallying the flyers to make a fresh stand. "Colonel Hampden charged with much courage", said Essex in his despatch. Again they were flung back. Rupert kept the field for half an hour, expecting further attacks which did not come, and then set out for Oxford, which he entered in triumph by two o'clock, dragging 120 miserable half-naked dragoons,

with many prisoners "of condition" besides. "He had sent the news of all before by Colonel Urry, whom the King presently knighted."

The Court had far better cause for rejoicing than it knew at first, for in leading the last charge Hampden received two carbine bullets in the shoulder. He rode "off the field before the action was done, which he never used to do, with his head hanging down, and resting his hands upon the neck of his horse." Tradition has it that he turned first towards Pyrton, only to be turned back by parties of Royalist horse, and that his lifelong friend Arthur Goodwin, Colonel of the Buckinghamshire Horse, overtook him before he had gone far. But alone or befriended he rode through the heat of the June day with his life slowly ebbing. Most probably he crossed Haseley Brook by the 'splash' in Pyrton Lane, where now the teazles flourish, he avoided Haseley Court, for the Huddlestons were Royalist, and according to tradition he stopped for a drink of water at a cottage in Little Haseley. Beyond Haseley the undulating fields rise slowly towards Thame, and if presently he turned to look back to Pyrton and his familiar Chilterns the countryside was again spread out like a map below him, but now it was a map of defeat, with the sun glinting here and there on the helmet of a wounded straggler who was picking a way among the sentinel elms. At least he can hardly have failed to remember on that ride the Latin verses he had written for *Lusus Palatini*, thirty years before, to celebrate the marriage of James I's daughter Elizabeth to the Elector Palatine, his verses declared that the offspring of that marriage must be incomparable, and the offspring was Prince Rupert.

Riding slowly by long familiar lanes and fields Hampden came presently to Thame, passed the Grammar School for the last time, and halted by the Town Hall in the broad street. There he was helped from the saddle and into the house of Ezekiel Browne the surgeon, which tradition identifies with the building that was for long the Greyhound Inn, but is now sadly changed. He lived six days longer, with Arthur Goodwin beside him, and mastered his pain to dictate letters to Parliament, urging the more resolute prosecution of the war. Concern for his recovery was not limited to his own side. The King offered the services of a surgeon. But on June 24 he died, and next day he was taken back to his own woods, to be buried in the church at Hampden. The leadership passed to his greater, more ruthless cousin, Oliver Cromwell.



# King Cotton

by CLAUDE BIRTWISTLE

WHEN cotton was first used no one knows. Its cultivation in India and the neighbouring islands dates back thousands of years. It appears to have been known in Egypt at least six centuries before the birth of Christ, probably as an import from India. Its introduction to the nations of the west took place at a much later period, and seems then to have been regarded as a luxury.

It was introduced to Europe by the Spanish Moors in the 9th century A.D. They cultivated it in the Plains of Valencia, and cotton manufacture was soon established at such centres as Grenada and Seville. But five centuries passed before it was imported as thread into England.

In America the manufacture of cotton cloth appears to have been carried on by Peruvians and Mexicans long before the advent of the British settler. By the end of

the 18th century the main suppliers of British cotton were the British West Indies, Asia Minor, the Levant, Brazil and the East Indies. The North American continent was not among them, although soon after the U.S.A. began to export in increasing quantities until they became the world's largest producers.

\* \* \*

The cotton plant is a sub-tropical perennial shrub. Usually, it is treated as an annual, which increases its yield. The fibre is obtained from the seed-pod, or boll, which opens when ripe disclosing the fibre attached to the seeds. This fibrous covering swells out into a mass about the size of a small apple which can then be easily picked. After picking, the fibre is separated from the seed by a process known as ginning. The seed is a valuable by-product, since much of the richness of the land absorbed by the plant goes into it. It is used for the manufacture of cotton-seed oil, or the winter cattle-feed known as cotton-seed cake or oil-cake.

The length of the fibre is known as the staple, and this is what governs quality. Cotton of staple less than an inch and an eighth is known as 'short-stapled', above this length it is 'long-stapled'. The longer the staple the better the quality of the fibre, some long-staple varieties are as long as two and a half inches.

The various species of plant differ in size, colour of flower, length, strength and fineness of fibre. The areas of production are not all able to use the species producing the best quality fibre, in India, for example, the cotton is of a short-stapled variety, the staple being often only half an inch.

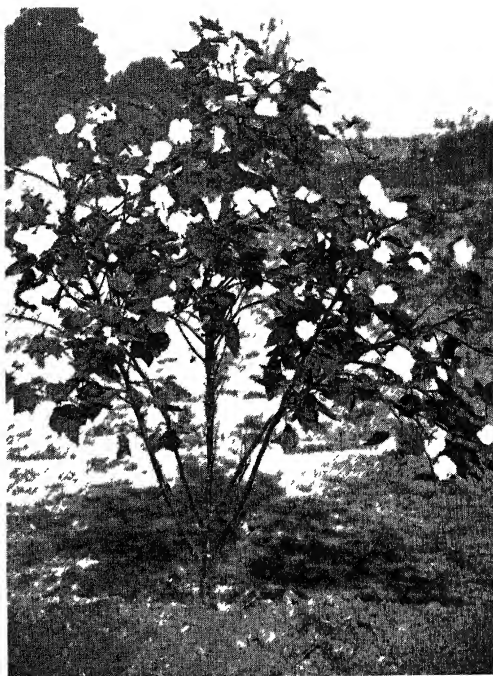
The plant's sub-tropical nature gives it a northern limit of cultivation at about latitude 40° N. It is also grown in the tropics where climatic factors are suitable, e.g. the uplands of Brazil and India. In these areas, however, the tropical heat has a tendency to produce coarseness of fibre.

The plant cannot withstand frost, so that an essential climatic requirement is that the entire period from planting to picking shall be frost-free. The length of this period is about seven months. A temperature of at least 60° F., with plenty of bright sunshine during the ripening period, is necessary. The best soils are light, lumpy ones or sandy loams and manuring has been found to increase the

(Right) Ripe and unripe bolls, or seed-pods, on the cotton plant (Below) Cotton pickers near Memphis Mechanization has failed to surpass the effectiveness of hand-picking (Opposite) Seed-pod of the cotton plant which has ripened and burst open

yield, the increase due to manuring in some parts of the U S A amounting to thirty per cent The plant also requires a rainfall of from twenty to forty inches, although it is grown in Egypt and India by irrigation Irrigation has also been resorted to in the extreme west of the U S A , where the plant is increasingly cultivated in order to escape the ravages of the boll-weevil

The main cotton-producing countries are (in order of importance) the U S A , India, China, U S S R , Egypt and Brazil Minor producers include Turkey and Iran, Argentina and Peru, the plateau region of Mexico, parts of the Transvaal, Sudan and Uganda Uganda, where the cotton is produced on the plateau areas, is the second Empire-producer of cotton, India, of course, is first in importance It should be noted, however, that the six main areas mentioned



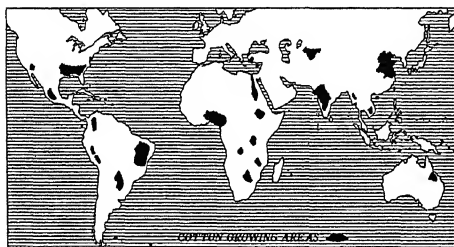
From Claude Birtwistle



Dorren Leigh

produce almost 90 per cent of the total world output, while the USA alone produces roughly as much as the other five put together

The Cotton Belt of the USA extends eastwards from Texas in a broad band across the south-central part of the country almost to the Atlantic coast. The name 'Belt' is as fallacious as it is when applied to the Corn Belt, or the Wheat Belt, etc. For the area is not continuous, and quite apart from strips of heavy production alternating with those devoid of cotton, nowhere does one find field after field of cotton, and nothing else but cotton, as far as the eye can see. For even where production is heaviest the farmer utilizes some part of his land to provide food crops for himself and his livestock—the most important being his horses. But the immensity of the areas under the crop, the heaviness of the production and the enormous population it supports are hard to realize

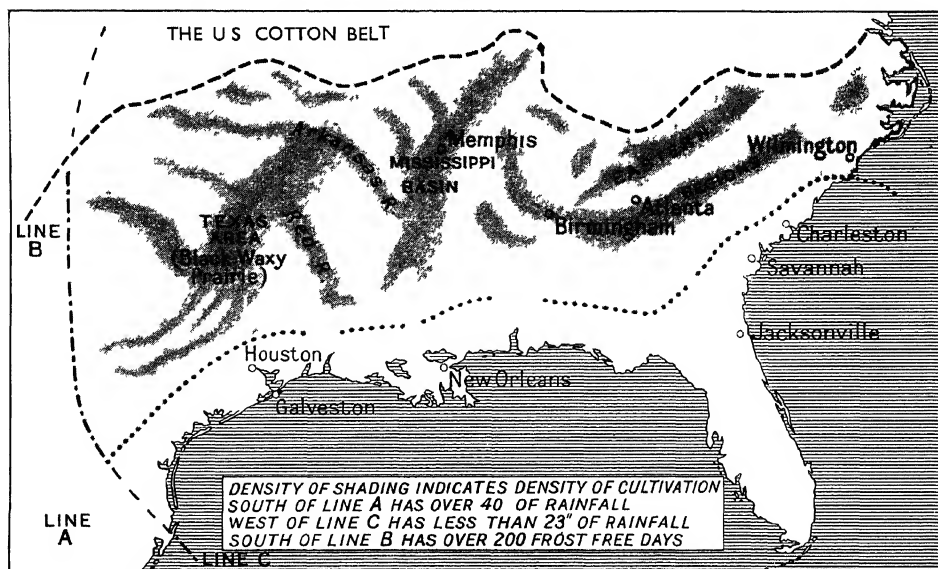


The greatest pest of cotton production is the cotton-boll weevil which entered the area in 1895 from Mexico. Its first appearance was in the lands adjoining Mexico, and it quickly spread from Texas eastward until it covered the entire area. The larvae of the weevil eat their way into the cotton-boll before it opens and spoil the fibre

The difficulty of combating weevils is increased by the speed with which they multiply, one pair increasing to about 12 millions in a year. The only successful method of destroying them so far discovered is to spray the plants with calcium arsenate, at the same time destroying all bushes and shrubs in the area which may provide winter quarters for the weevil. It appears, however, that the weevil has two natural enemies, drought and frost, and though these are the natural enemies of the plant also, some attempt has been made to take advantage of the fact in growing cotton in the drier area of western USA. This necessitates the use of irrigation, and the area is producing well

India stands second to the USA in world production of cotton, but the quality on the whole is poorer than the American product. The cotton is short-stapled, and the yield per

(Left) Cotton-growing areas (Below) The Cotton Belt of the United States of America





acre is less than 100 lb compared with around 170 lb in the U S A The quality, though, is improving, which enables it to be used increasingly in Lancashire mills, where a long-staple variety is needed

In India the plant is grown in areas with a rainfall during the growing period of from twenty to forty inches and under irrigation Irrigation enables a better quality cotton to be produced The plant used is the introduced American variety The importance of increasing the amount grown by irrigation in order to improve the quality of the Indian crop is obvious

The chief producing area is in the N W Deccan on the fertile 'Black Cotton Soils' Crops are produced without the use of irrigation owing to the moisture-retaining soil, but the area often experiences heavy rain and periods of drought This, coupled with poor farming methods, gives a low yield and a poor quality The irrigated area of production is in the north-west, in the Punjab and Sind

China follows India in importance as a cotton-producer, but the crop is now used internally It is cultivated mainly in the central and northern provinces, the chief area

being the valley of the Yangtse River and the Hwang-ho Basin It is also cultivated as a summer crop as far north as Peiping

The U S S R is another country whose raw cotton output is consumed by home industry For some time the home production had to be supplemented by imports, but imports have lately shown a steady decrease

The extension of the railway system has led to essential foodstuffs being grown increasingly to the north of the country, thereby releasing more land in the south for cotton-growing The cotton is grown by irrigation, the main area being the Ferghana Basin

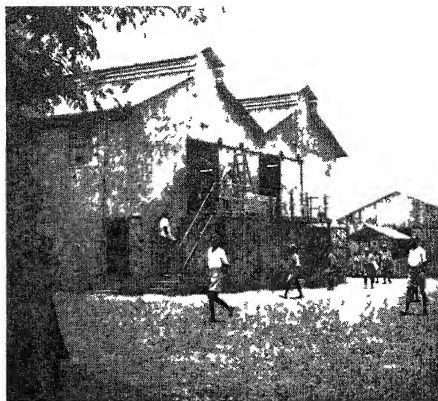
The other main producers are Egypt and Brazil The latter is the most important area in South America, although accounting for less than 5 per cent of total world production The cotton is grown in the upland area to counteract the excessive tropical heat, but even so the effect of the heat is shown in the coarseness of the fibre

Egyptian cotton is of the finest quality, Egypt being probably the world's best cotton land The continuous bright sunshine coupled with irrigation give not only good cotton but a heavy yield, the Delta region producing over 400 lb per acre The plant is also

*In the U S A Cotton Belt the boll-weevil causes much destruction Of the methods of combating this pest so far tried, the most effective is dusting the crop from the air with calcium arsenate*

*From Claude Birtwistle*





*Dorren Leigh*

(Left) *Piccaninnies in the cotton fields of North Carolina* (Right) *A cotton ginny at Kavirando, Kenya* In the ginning process the fibre is cleaned of the seed and other impurities before being baled for export (Below) *An Assamese girl flocking cotton by a more primitive method*

grown along the banks of the Nile in Middle Egypt

In normal years the British cotton industry takes the larger part of the export. This, and the fact that the acreage under cotton is second only to that of maize and exceeds wheat, shows the dependence of Egyptian prosperity on the sale of its cotton crop, and explains the British Government's action in purchasing

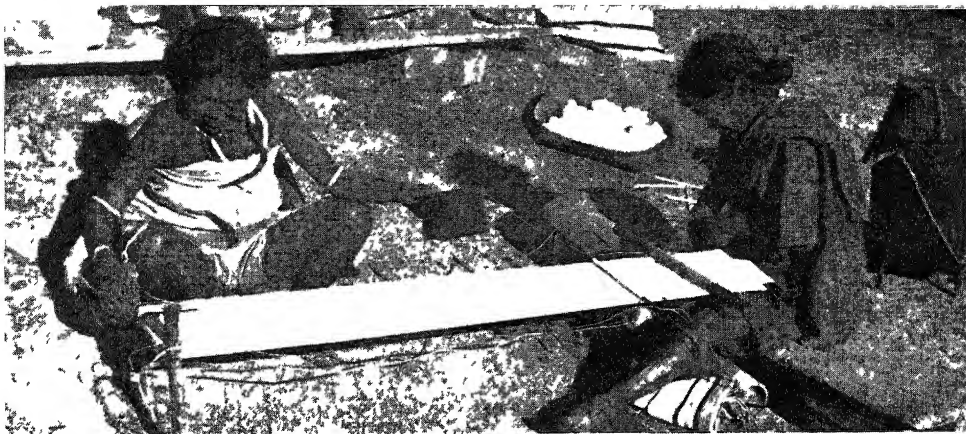
the Egyptian cotton crop of the last few years although they have not been able to ship it from the country

Britain's imports of cotton before the war were decreasing, owing partly to an increase in artificial silk manufacture, but more to increased foreign competition

Cotton manufacture can be divided into three main operations spinning, weaving and

*Dorren Leigh*





Dorien Leigh

*Hand cotton manufacturing industries have been badly hit by the flood of cheap quality fabrics poured on the markets in recent years Assamese women putting up a hand loom*

finishing When the fibre has been separated from the cotton seed by the process of ginning, the raw cotton is pressed into bales and despatched to the factories Here the actual manufacture starts

The bales are opened and the cotton loosened The various qualities of cotton are mixed in different proportions to suit the type of yarn it is desired to produce During the mixing process the fibres are cleaned of dirt, and the whole is then passed on to the carding engine This consists of numerous rollers with projecting wires rotating at different speeds, drawing the fibres into a narrow, thick ribbon This ribbon is called a 'sliver' and is passed on to the drawing-frame, which, also by means of rollers rotating at different speeds, draws out the slivers into a thin uniform sliver The slivers may be passed through numerous drawing-frames in order to obtain a high degree of uniformity

The slivers are then subjected to slubbing which imparts a slight twist to the sliver, thereby giving it the form of a circular thread This is known as 'rove yarn', and it is drawn out and further twisted in the spinning frame to produce the finished yarn The two most used types of spinning frame are known as the methods of 'ring-spinning' and 'mule-spinning', the latter particularly is used for the finest yarns

The change from hand spinning to machine spinning took place as a result of numerous inventions The introduction of rollers was first undertaken by Paul and Wyatt, but the

greater development of the spinning machine is due to Hargreaves of Blackburn who invented the spinning jenny (1767) whereby eight and more threads were spun at once onto vertical spindles In 1769 Arkwright of Preston invented a spinning frame using rollers and driven by water power, while about 1779 Crompton of Bolton invented the mule jenny which could be driven by steam power and was the forerunner of the modern self-acting mule

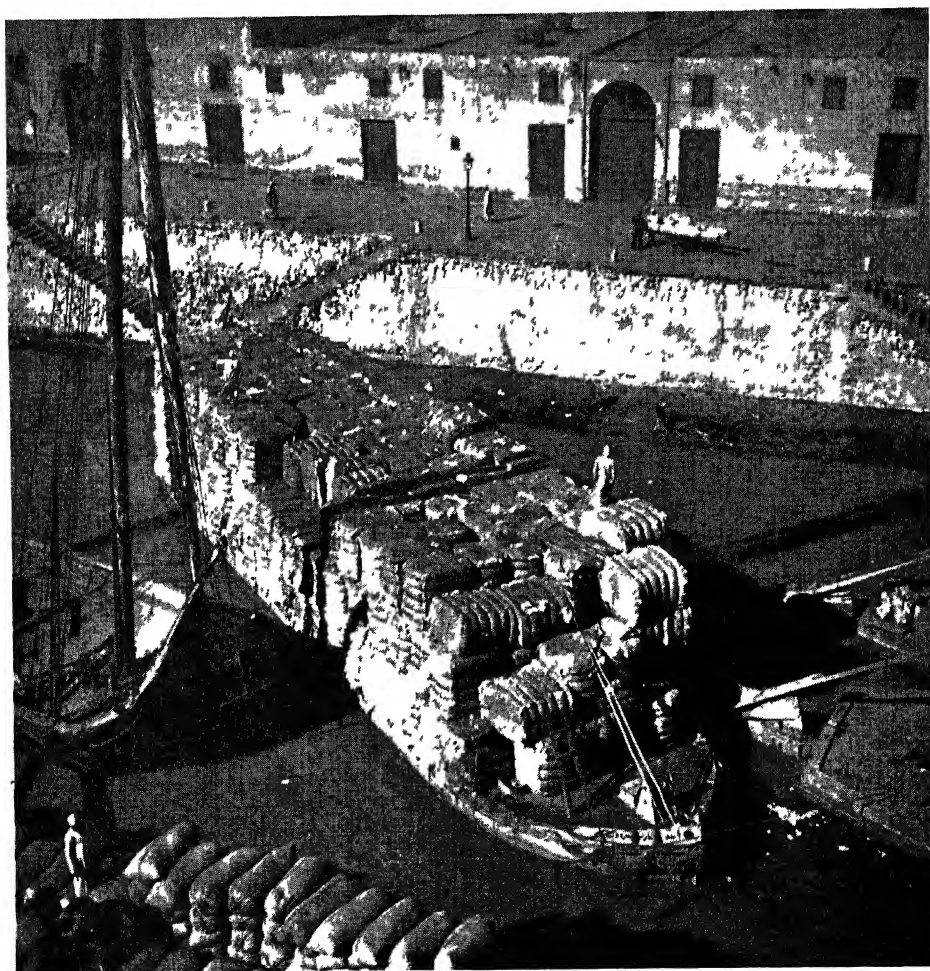
The great invention in weaving was the flying shuttle invented by John Kay about 1750 By this invention the shuttle was automatically returned to one side of the loom ready to be sent across and back again time after time Previously it had to be thrown from side to side of the loom by two people

After spinning, the yarn is often dyed in order that designs (e.g stripes and checks) may be woven into finished cotton If this is not done, the cotton is manufactured in its white state—commonly called 'grey'—then finally dyed in the piece or printed with some design in one or more colours After spinning, the yarn is often also bleached, or doubled, or mercerized, or otherwise prepared The various yarns are then divided into those for warp and those for weft In the former the weaving process uses simultaneously many hundreds of threads, lying horizontally adjacent to each other for the entire width of the finished cotton, while the weft is introduced as a single thread

Warp yarn has to be much stronger than weft, as the warp is subjected to greater tensions during the process of weaving. To obtain this strength, and also to prepare the warp on a 'beam'—a large bobbin-like structure—for insertion in the loom, the yarn is treated by one of numerous methods. It is despatched from the spinners either on bobbins or in large balls or 'cheeses', and 'beam-

ing' consists merely of running these threads onto the beam so that they are spaced equally to the width of the beam, which corresponds to the width of the finished cotton. Another method is warp-dressing which is used for the more complicated patterns, *e.g.* fine stripes, and also necessitates constant brushing of the warp during the time it is being run onto the beam. This increases the quality of the

*Cotton fibre for export is compressed into bales of about 500 lb each. A barge laden with cotton in the Mahmudieh Canal, Alexandria. Egyptian cotton is long-stapled, of the best quality, and is in great demand throughout the world. Lancashire, specializing in better quality cottons, uses considerable quantities*



*Dorion Leigh*

finished cotton and is particularly suited to better-class goods

A third method is by the 'wet tape' which consists of taking the warp yarn from numerous bobbins, from cheeses or from beams onto which it has previously been run, passing all the threads over rollers where they are treated with starch solution, then over steam-heated cylinders and winding dry onto the weaver's beam

After the spinning process the fineness of the threads is denoted in 'counts' which means the number of lengths of threads, each 840 yards long, contained in 1 lb of the yarn. The counts vary from 18's up to about 100's, but above this degree of fineness is introduced what is known as 'twofold' yarn, consisting of two threads twisted together, these may go up to 160's, usually known as 'twofold 160's'. Such yarns are naturally of the best quality and the most expensive owing to the high degree of fineness

The number of threads, or 'ends' as they are called, run onto the weaver's beam varies with the fineness of the yarn and the width of the cloth, but with the finest cottons as many as 6500 ends are run side by side onto a beam thirty-two inches wide, the finished material in this particular instance is fine shirting cotton

Reeds consist of numerous fine parallel wires fixed so that there are narrow spaces between each through which the ends can pass, they are used in the loom to keep the ends in true position during the weaving process. The threading of the warp through these reeds is done by the loomer and the beam and reed are then fixed into the loom

Between the beam and the reed the loomer has drawn the threads through the eyes of the 'healds'. Healds are lengths of fibrous string or wire containing in their length a small hole through which the thread can be drawn. When fixed in the loom, the healds work in various combinations which lift some of the ends above the others, thus making a space through which the shuttle can pass, leaving behind it a thread. The healds then change, lifting a different lot of ends, and the shuttle returns once more, leaving the thread and thereby introducing the weft into the warp. The different combinations of ends lifted by the healds can be made to produce designs in the cloth

Another way of introducing variety of design is by the check loom which uses two or more shuttles filled with different coloured yarns. These are contained in a cylindrical arrangement which automatically turns into position the shuttle containing the particular

colour of weft required for the part of the design being woven. This alternate use of different colours of weft produces a check design in the finished cotton

As the cotton is woven in the loom it is drawn forward onto a roller from which it is cut and removed in 'cuts', i.e. lengths of fifty yards and upwards, varying with the type of cloth. These pieces are then sent to the cloth-looker who carefully examines them, removing slubs, lumps or any foreign matter which may have been woven in or attached to the cloth

The cotton is now ready for finishing, a process which varies according to the cotton and the use to which it is to be put. For instance, it may be singed to remove the outstanding parts, then raised, cut, brushed and steamed, and it may be decided to load the fabric with starch. This gives added weight to the cloth and a better finish. There are also other methods to which the cloth may be subjected

Cotton is frequently dyed in the piece after being woven grey, or printed with designs of many colours

There is probably no better illustration of the relationship between the rise of an industry and the natural conditions of a region than is supplied by the Lancashire cotton industry. The woollen industry of the Pennines is today restricted to their eastern slopes, but at one time the western Pennines also manufactured woollens, the industry being based on local wool supplies, the humid atmosphere which facilitated spinning, and the plentiful supply of fresh water from the mountain streams to aid the washing of the wool. The necessity of a damp climate to keep the thread from becoming brittle during the spinning process is even more important to the cotton industry than to the woollen industry, hence the choice of the damper western side of the Pennines for cotton

When, at the end of the 17th century, Flemish refugees introduced the manufacture of cotton into Lancashire, Manchester had the advantage of being a non-corporate town, i.e. it admitted foreigners whereas many other towns did not. Thus it attracted the refugees and their industry to itself

The mountain streams were as useful for their power to the cotton industry as they had been to the woollen industry, and the soft lime-free water facilitated the washing of the cotton, and, later on, its bleaching and dyeing

These, then, were the original factors which led to the rise of the industry in Lancashire, but subsequent factors also emphasized the importance of the area. With the introduc-



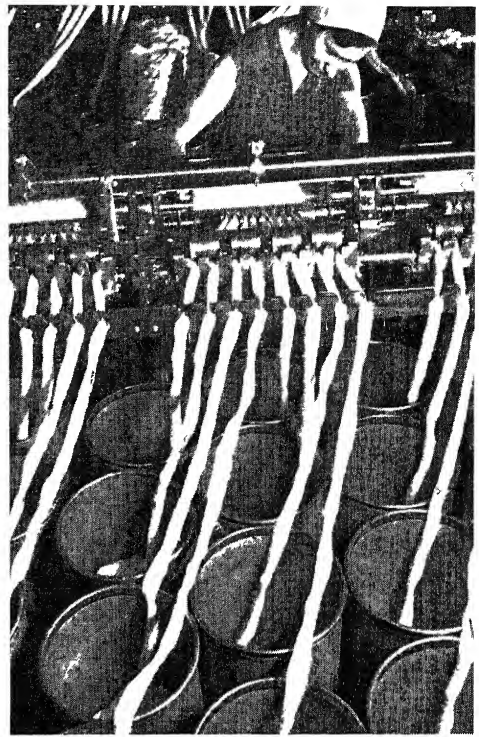


*Dorren Leigh*





*Dorren Leigh*



*Dorren Leigh*

(Opposite) When the bales of cotton reach the spinners, they are loosened, mixed according to the type of cotton required and passed to the spinning machine (Above) Old and new in spinning A Yugo-Slav peasant spinning cotton by the old hand method, one thread at a time is laboriously spun Modern machine spinning produces hundreds of threads simultaneously

tion of steam power large supplies of coal were close at hand, while the presence of iron ore supplied the necessary machinery. Again, when bleaching and dyeing were introduced, the Cheshire saltfield was near at hand to provide the chemicals. Add to all these the easy import of raw cotton and export of finished goods through the magnificent port of Liverpool, and subsequently Manchester, and also the facilities for inland transport provided along the Lancashire Plain, and we begin to see the great factors which worked together to form a favourable setting for the cotton industry.

Even the geological structure helped the industry. The clay soils of Lancashire retain moisture and thus tend to keep the lower layers of the air moist even during long dry spells, while the basic rock (Millstone Grit)

provides an abundant source of sandstone for building purposes.

There is one final factor which must be mentioned, and that is the Lancashire folk themselves. The various branches of cotton manufacture call for a high degree of skill, and the hereditary skill of the Lancashire cotton operatives dates back to the days of the flax and wool spinning cottage industry. During the past few years when Lancashire has met with increased competition in world markets, it is inherent skill alone which has enabled her to produce a better-quality article than her competitors and thereby retain her better-class markets.

The other centre of the British cotton industry, which has largely died out today, was centred in Scotland on the Lanarkshire coalfield, and the factors which favoured its

growth in this area were the humid atmosphere, the presence of power and labour, and the easy import of the raw cotton—Glasgow being even nearer the U S A cotton area than Liverpool

What, then, led to the decline of the area? Its rise may almost be said to be the cause of its downfall, for the iron and steel industry of the region grew up because of the cotton industry. But once the iron and steel industry was established, the factors favouring it were greater than those favouring the cotton industry, and this led to specialization at the expense of cotton. The only centres of any importance now are Glasgow and Paisley, the latter largely producing sewing threads

To return to Lancashire. The geographical setting of the cotton industry is dominated by the Rossendale Fells, and this leads to a major division of the industry. To the south of the Fells there is a heavier precipitation and a more humid atmosphere than in the rain-shadow area to the north. As cotton-spinning requires a damper climate than weaving, owing to the brittleness of the fibres when dry, spinning takes place in the area to the south of the Fells, while weaving extends throughout but is more important in the north

The Fells themselves are of porous sandstone overlying clay, and this gives rise to numerous springs, so that we find cotton-finishing being carried on round the edges of, and actually on, the Fells

The separation of the area into a spinning and a weaving region has economic as well as climatic reasons. The organization of the spinning industry is essentially different from that of weaving. Spinning deals with a smaller range of products, and is therefore able to manufacture on a more stable and larger scale. Moreover specialization is favoured by the wide range of yarns and fabrics, and few firms could undertake the manufacture of all types without becoming unwieldy

Unfortunately, and here is the great drawback to the Lancashire industry, the separation and specialization of the industry has led to disintegration. There are six main types of firm, viz the merchants and brokers who handle the import of the raw cotton, the spinners, the yarn merchants, the manufacturers, the dyers and finishers, and the piece-goods merchants. These various firms are distributed throughout Lancashire, and we may give an illustration of the movement of one particular consignment, based on fact. The raw cotton was imported to Manchester

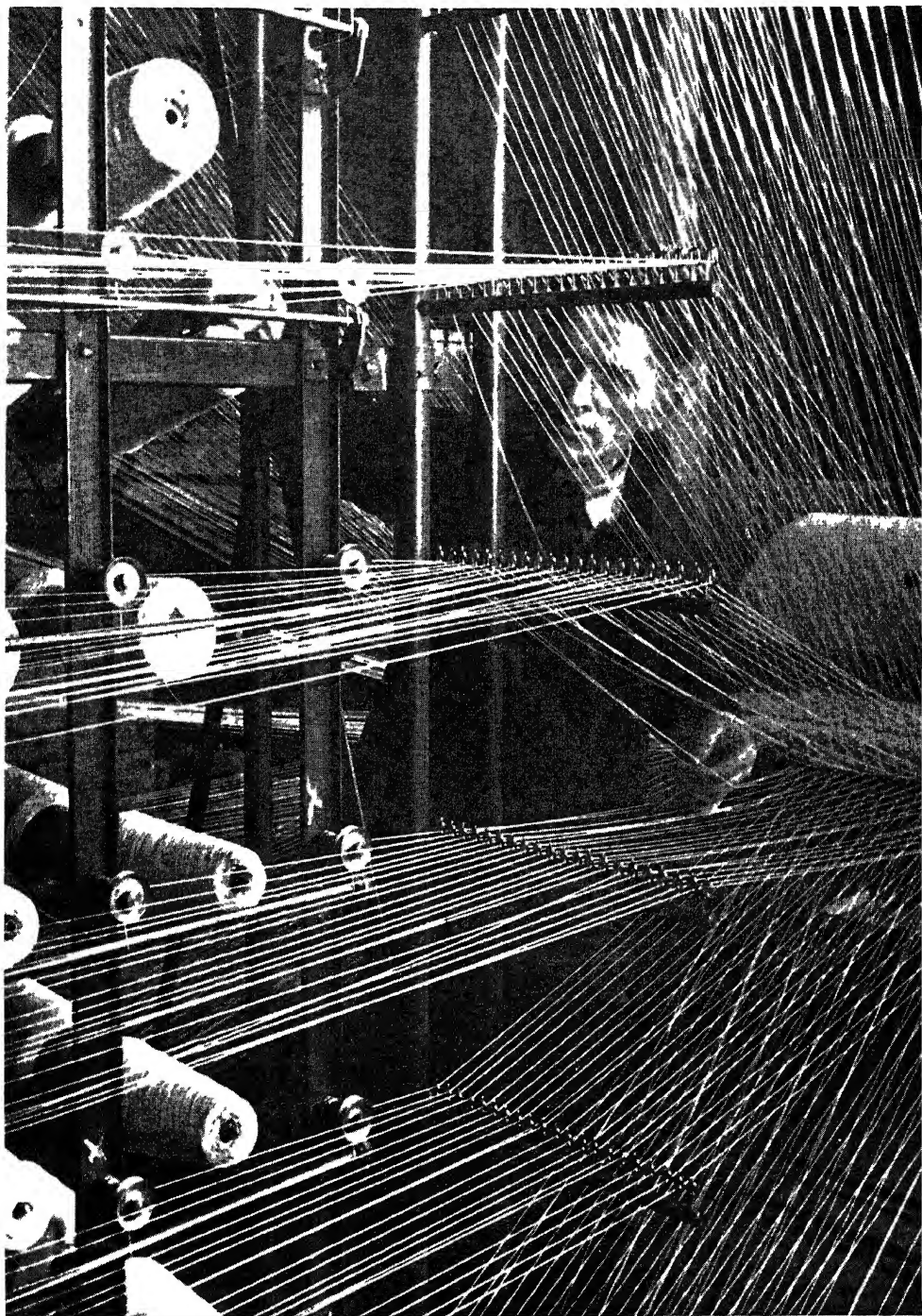
where it was sold at the Exchange. It was sent north to Bolton for spinning, then to Manchester again for the yarn merchant. From here it was sent north to Preston for weaving, passing on its way, it should be noted, through Bolton. After being woven at Preston it was examined by the manufacturer's cloth-looker, then sent to the warehouse in Manchester where it was once more examined by a cloth-looker belonging to another firm. The cloth was then sent to Oldham to be dyed, and returned finally to Manchester to be made up. In many cases, however, on its last return to Manchester it would pass into the hands of the piece-goods merchants

From this can be seen the expense of transport owing to decentralization. In addition, each of the six types of firm has to show a profit on the goods. Small wonder, then, that Lancashire is finding it difficult to keep up with her competitors who do not suffer from this disadvantage, and that today she is restricted to the higher-priced markets

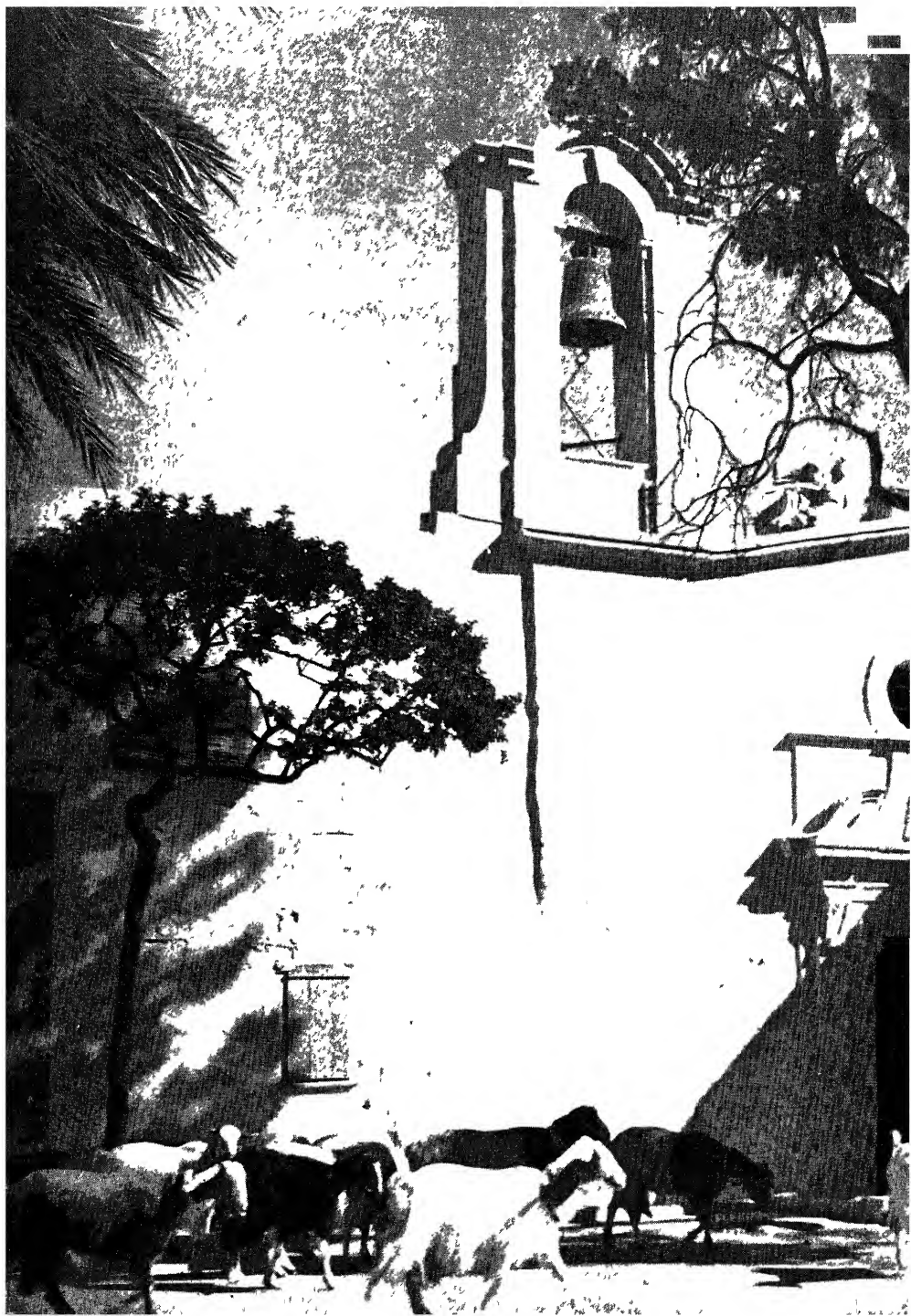
(Opposite) *A warping machine which runs hundreds of parallel threads on a beam (seen in right background), thus forming a warp. The warp is then sized and put into the loom for weaving. (Below) The Lancashire Cotton Area. The predominance of the Rossendale Forest upland region should be noted*



Stanford London



*Dorion Leigh*





# Sunlight on Malta

Notes and Photographs  
by Barbara Power

*Now that the heroic island of Malta has weathered the storm to which it was exposed for two years, between Italy's entry into the war and the British victory in Libya, it is with pleasure enhanced by pride and relief that one turns to contemplate again the beauty that nature and history have given it, which can still be found in spite of the many scars inflicted by concentrated bombing*

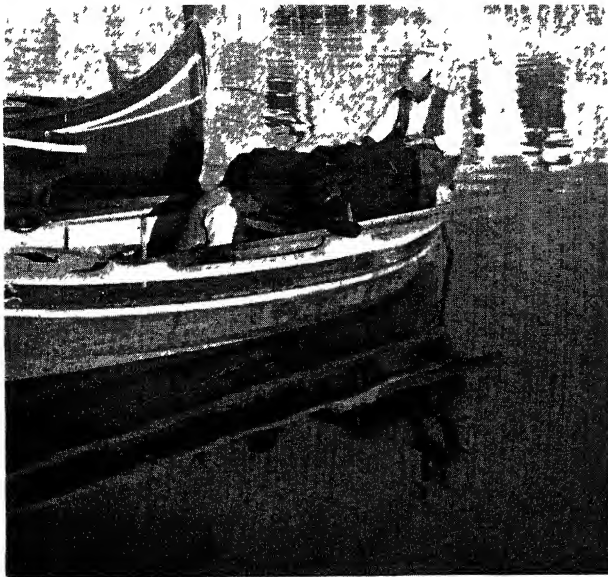
*My first picture shows one of the many village churches in which Malta is so rich, for the Maltese are an intensely religious people. A few of these churches date from the time of the Knights of St John, others were built more recently, sometimes by villagers with their own hands.*

*The soft limestone, quarried from the site of the building, can be cut with an ordinary saw or hewn with an axe. It is very durable, this stone, and has survived centuries. It withstood Turkish guns during the siege of Malta in 1565—in too many cases only to fall victim to Axis bombs. In peace-time at certain hours, on Sundays and feast days, the air vibrates with the sound of bells, from village and town, across the harbours and creeks.*





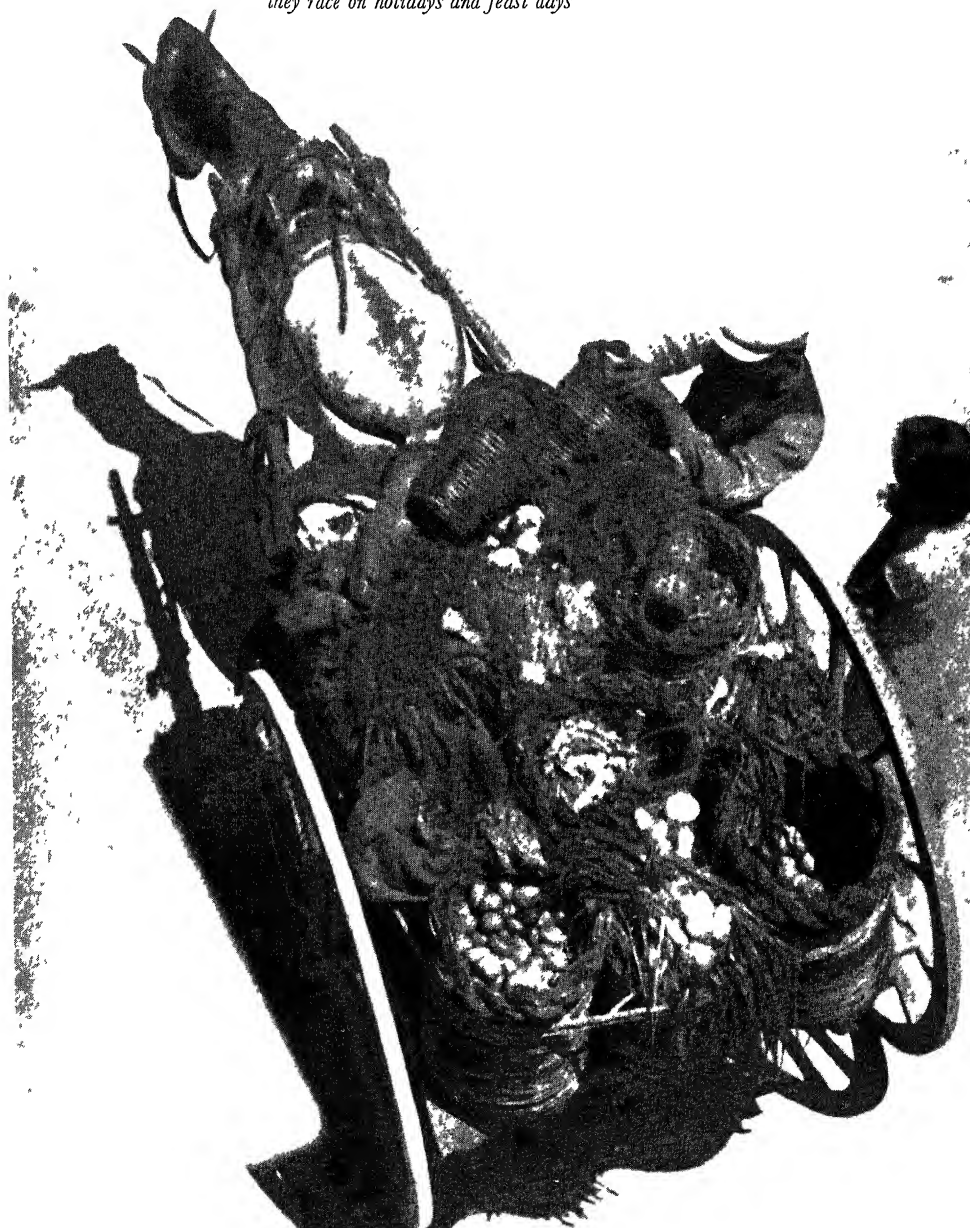
*Well laid-out public gardens abound in Valletta and its suburb, Floriana, on the bastions overlooking the Grand Harbour and surrounding the Governor's palaces of San Antonio and Boschetto. Palms and pepper trees shade walks between beds of brilliant cinerarias and tall arums. The walls flame with bougainvillea and the air is sweet with the scent of stocks and orange blossom. Every house has flowers, sometimes no more than a cascade of pink geraniums falling from a wrought iron balcony. The warm climate allows familiar English flowers to grow side by side with tropical plants. Here tulips and freesias are seen growing together in the old garden of a private house.*



*Fishermen at work mending their nets. The painted boats (dghaisias) provide touches of brilliant colour, which is reflected in the still waters of the creeks that intersect the suburbs surrounding the Grand Harbour.*



*A Maltese housewife bargains with the man who brings his vegetable cart to her door. Laden with the produce of Malta and her sister island, Gozo, these carts come daily from the country trading their wares from house to house. The soil of Malta, though rocky and shallow, is very fertile and the farmers cultivate every inch of their terraced fields. Fruit and vegetables grow in abundance. A pleasant local wine is produced from vines grown among the rocks. The vegetable carts are gaily painted and the horses well tended. Many Maltese own light 'flat carts' and well-bred ponies, which they race on holidays and feast days.*







*Photochrom*

(Opposite) *All that remains of the law courts in Valletta, one of the many buildings of local and historical interest now in ruins. In front of it stands a carrozzia, always common in the streets of Malta, they now entirely replace the cars of pre-war days. (Above) Valletta and part of the Grand Harbour, seen from Sliema. In the foreground are some of the terraced gardens which produce Malta's abundance of fruit and vegetables. (Right) Women of the island of Gozo making the lace for which the islands are famous.*



*Paul Popper*

# The Wilderness of Judah

by HENRY C BREWSTER

BETWEEN the fertile coastland of Palestine and the great depression of the Jordan and the Dead Sea is a desolate stretch of rugged, waterless country, known as the Wilderness of Judah since the days when the children of Israel came up into the promised land from the plains of Moab

In the course of time much has altered in the face of Palestine and Trans-Jordania, the Phœnician and Greek towns of the coast have vanished, and close to Jaffa, the ancient Joppa, the modern Tel-Aviv has arisen. The Roman cities, only if specially favoured by fortune as Gerasa has been, are represented by monumental ruins, and even old Jerusalem, unspoilt and untouched as it is within its Turkish walls, is not the Jerusalem of the ancient Israelites, upon the site of the Temple stands today a stupendous group of buildings to the glory of Allah and his Prophet, and outside the old town the drab luxuries and comforts of a new world straggle in every direction.

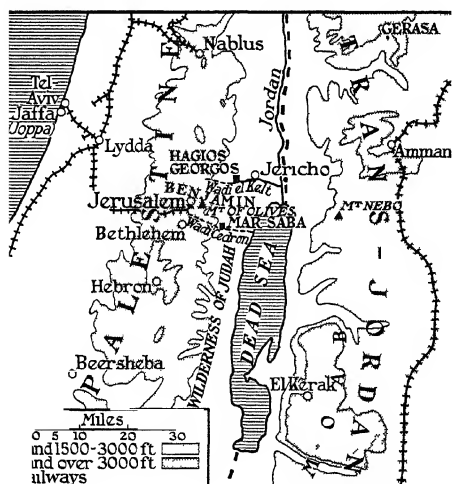
Large tracts of fertile land have dried up and become barren through neglect, depopulation, wars, raids, deforestation and erosion, while within recent years long stretches of coast have been reclaimed by enthusiastic Zionists and turned into luxuriant orange groves. But nothing has changed the Wilderness of Judah, which remains, as it always was, a mountainous, stony desert.

When Moses "went up from the plains of Moab into the mountains of Nebo", and, looking over the Dead Sea and the valley of the Jordan, was shown by Jehovah the promised "land flowing with milk and honey", surely he must have been disappointed unless his attention was directed mainly on "Jericho, the city of palm trees"—those palms which in later years were always coveted and often possessed by greedy despots such as Herod and Cleopatra, for everything else was then, as it is now, a magnificent desolation extending westward as far as the uplands of Judea and Benjamin.

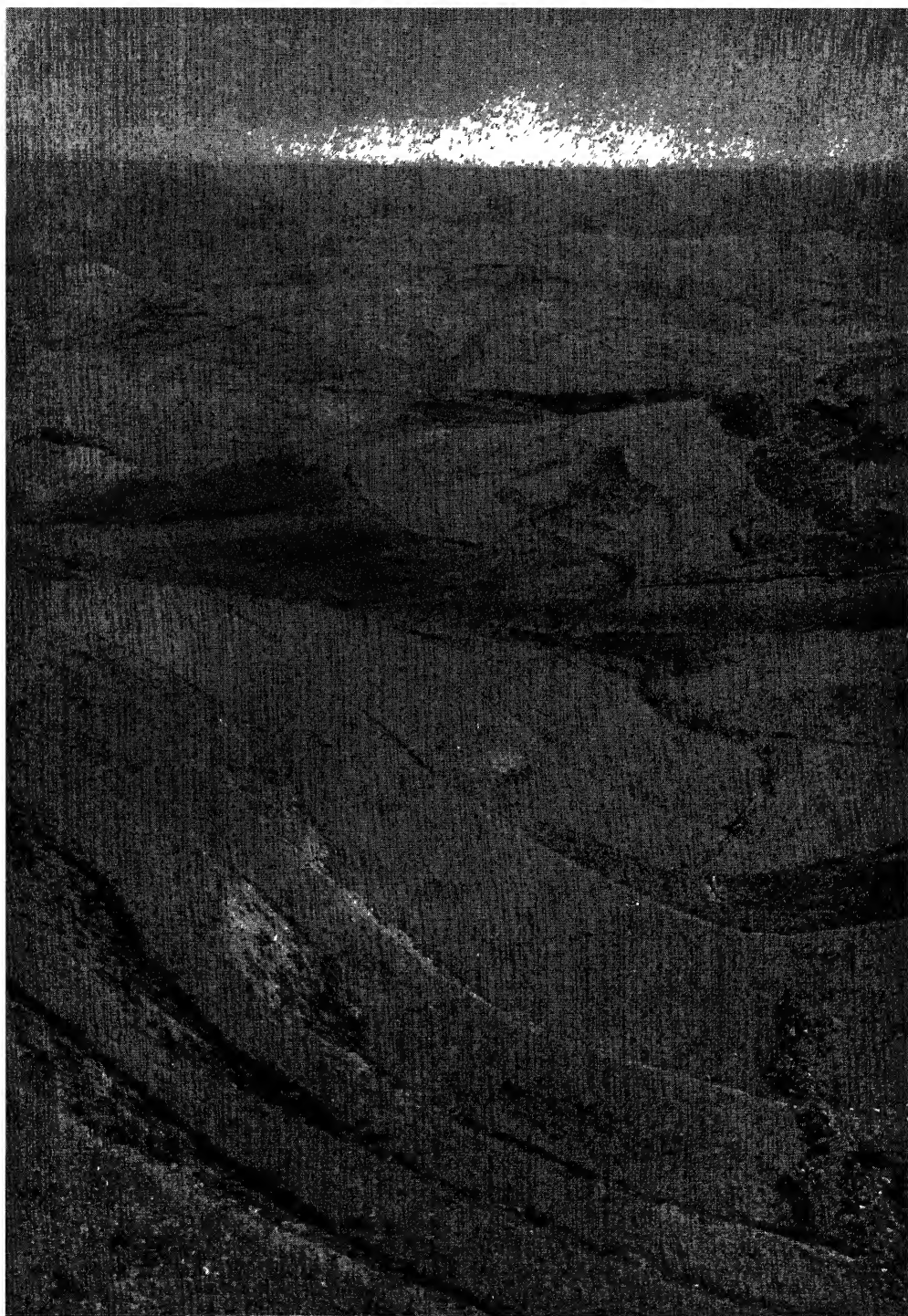
Today, as probably always in the past, the Wilderness comes practically up to the walls of Jerusalem. From the gentle ridge of the Mount of Olives you can see it, almost from your very feet, sweeping away to the east in all its Asiatic grandeur. Intersecting its smooth, velvety surface, deep gorges run down, from west to east, into the valley of the Jordan and the Dead Sea. These gorges which break up the smoothness of a rolling desert are flanked by walls of red rock several hundred feet high, and so narrow is the gap between them that looking down from the hills of Jerusalem and Bethlehem you hardly guess their existence. In the winter when the rains fall these 'wadis', as they are called by the Arabs, become roaring torrents, while up above the waves of the Wilderness get covered with thin grass, thus offering a meagre pasture to the goats and camels of the Beduin. But during the rest of the year water is precious and the grass gets burnt away by the sun into sparse threads of gold, showing the earth almost naked.

Robbers and tribal raiders have found this desolate region ideal for ambushing and murdering helpless travellers on their way to Jericho and Trans-Jordan, and the deep winding gorges and caves in the rocks have proved perfect hiding-places for outlaws. Until quite recently, when the truce between Arabs and Jews put a temporary stop to disturbances, the road between Jerusalem and Jericho, pent in as it is between cliffs and escarpments, was as unsafe as in the days of the Good Samaritan.

Not only robbers, however, have dwelt and carried on their activities in the Wilderness, from time immemorial prophets, anchorites and monks, such as Elijah, John the Baptist and St Jerome, have felt its fascination and



Stanford London







*Henry C. Brewster*

*The Monastery of Hagios Georgos, seen from the opposite side of the gorge*

have withdrawn into its solitude for prayer and penance

When in the 4th, 5th and 6th centuries of our era monasticism grew from the organized zeal of ascetics, penetrating to the most inaccessible corners of the Middle East, Palestine showed herself no less ardent than Egypt in religious enthusiasm and the Wilderness of Judah became the Thebaid of the Holy Land. The deserts became peopled. Thousands of monks flocked to the most awe-inspiring and desolate parts of the country, some of them led the lives of hermits, honeycombing the cliffs of solitary gorges with their primitive

and almost unreachable dwellings, while others, the so-called 'coenobites', grouped themselves together in communities and built the first monasteries of Christendom

Right across the Wilderness, from north to south, as far as Sinai and the monastery of St Catherine, ran an almost uninterrupted line of buildings erected by the early Christian ascetics who preferred the life of the desert to the comforts of a restless world. But despite the efforts of their founders, few of these monasteries have stood the test of time

Early in the 7th century, when the security which the Middle East had enjoyed for so



long as part of the Roman Empire was being threatened again by the looming aspirations of hostile peoples further east, the peace of these monasteries was shaken by the devastating invasion of the Sassanian Persians.

These traditional enemies of the Romans invaded Palestine and Egypt, putting to the sword many more Christians than did ever the Arabs, who shortly after wrested these provinces from the Eastern Empire and from their close connection with Europe for good and all. The Islamic occupation of Palestine, although considerably less ferocious than the rapid and fleeting Persian invasion, sapped the very life of eastern monasticism and in the long run proved far more destructive than the wholesale slaughter of monks, which like a hurricane had swiftly come and gone, allowing new recruits to fill in the gaps left by the martyred victims.

In the Wilderness of Judah not many of the early Christian monasteries have survived the vicissitudes of history. The chain of holy buildings has been swept away, and Hagios Georgos and Mar Saba are among the very few that can be deemed worthy, as far as natural situation and architecture are concerned, of belonging to the great monastic era of the East. From Jerusalem the more accessible of the two is Hagios Georgos, situated, or rather concealed, in the Wadi el Kelt—one of these characteristic gorges of the Wilderness—at a point about twenty miles east of the Holy City, not far from the old road to Jericho. By car you can reach almost the ridge of the gorge overlooking the monastery in less than an hour, but within that short spell of time you have left behind you nearly everything connected with modern civilization and you find yourself at a place which has always been a favourite haunt of robbers, a place surrounded by the solitude of the Wilderness, looking much as it was in the days of St John the Baptist.

Hagios Georgos is so well hidden in the cliffs of the wadi that it is not easy to catch sight of its walls even from the edge of the gorge. A small path hewn out of the rock winds down to the bottom of the ravine along which a stream rushes by in a trough from one of the few perennial springs of the upper regions of the Wilderness, flowing eventually into the valley of the Jordan, it waters the palm trees of Jericho.

The presence of water has attracted tufts of rich vegetation, and the softness and freshness of olive, orange and palm trees offer a delightful contrast to the austere majesty of the burning red cliffs. The monastery that faces you on the other side of the gorge, spanned by a

small stone bridge, is to a great extent carved out of the rock, so that most of its cells and half of the Byzantine church are placed well within the cliff which, acting as natural walls, adds much to the solidity of the construction. But even so the monastery has suffered, especially the front, from fires and raids, and has been rebuilt several times. The rooms inside the cliff, however, and the church bear the stamp of great antiquity.

According to tradition it was here, where Hagios Georgos still clings to the mighty walls of the Wadi el Kelt, that Elijah was fed by the ravens. The character of the entire neighbourhood is certainly in keeping with the spirit of asceticism. The cliffs are honeycombed with caves, once the holy dwellings of hermits and anchorites. In one of these dark hollows the traveller is shown hundreds of skulls neatly laid out in semicircular rows. This macabre display of human remains, however, fits in with the surroundings and attests the harrowing story told in connection with them. When Chosroes II invaded Palestine thousands of monks and nuns from neighbouring hermitages and monasteries fled before the terror of the Persian army and flocked to the stronghold of Hagios Georgos, hoping to find there some degree of safety. But the monastery was taken by storm and they were massacred. Their remains were gathered and preserved with veneration by the monks and hermits who afterwards came to repeople the holy gorge. The fanaticism of the Persians, who are supposed to have slaughtered ninety thousand Christians in Palestine alone, with the aid and active participation of the delighted Jews and Arabs, by whom the invaders were received as deliverers, is to this day remembered with awe in the Wilderness of Judah after centuries of Islamic subjection.

In the course of centuries the fortunes of Hagios Georgos have suffered all kinds of vicissitudes. Before 1914 a period of prosperity was enjoyed during which the community received generous subsidies from the Russian Church for the upkeep of the monastery, and for a time it was undoubtedly kept in good repair, and the old and crumbling walls were rebuilt or strengthened. But when during the last war fighting broke out again in Palestine, Turkish troops attacked and pillaged the holy buildings of St George. The doors were torn down and burnt, the windows smashed and the furniture and sacred vestments stolen, and up to this day nothing has been repaired or replaced, for the Russian subsidies are no longer forthcoming. One solitary monk lives within these massive walls and bewails the passing of those days when

the monastery was still pulsating with life. It is not the first time, however, that the fortunes of Hagios Georgos have sunk to a low ebb, the tide may yet turn, for a life of solitude and prayer will always have its appeal.

Hidden away in the Wilderness, well off the beaten track and more difficult to get at, is the monastery of St Saba, or Mar Saba as it is called by the Arabs, which architecturally is even more interesting and remarkable than Hagios Georgos. It was founded by the 5th-century saint whose name it still bears.

One morning in the burning and cloudless month of July I set out from Jerusalem with a few friends, hoping to reach Mar Saba early in the afternoon so as to see the old monastery and its surroundings bathed in the golden evening sun. A ride of five hours into the wildest and loneliest part of the desert between Jerusalem and the Dead Sea had the attraction of offering to the mind, steeped in the cares of every day, an exhilarating contrast with the European life of Jerusalem, then bustling with war activity.

Our donkeys were frisky and somewhat unmanageable, partly owing to difference of sex and partly, I presume, to their natural Arab liveliness. They had an awkward habit of lifting their hind legs all of a sudden and kicking away furiously at each other, often on the edge of precipices, while we hung on desperately to whatever we could grab. The soft rolling scenery, however, shimmering with light, and the black tents of occasional Beduin encampments, surrounded by their

camels wandering and grazing on the meagre remains of grass, had an absorbing fascination which soon made us forget the unpleasantness of such experiences and seemed to mitigate the sharpness of the sun which came piercing down upon us with all its might.

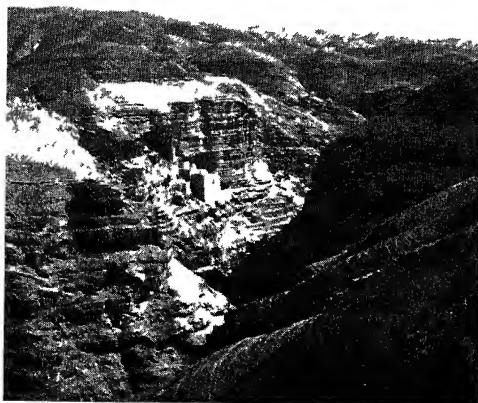
Instead of following the bottom of the Cedron gorge, which is perhaps a shorter route, we skirted the crests of the hills that sink away to the east. The air is supposed to be healthier up here, for in spite of the blazing sun it is occasionally stirred by a breeze. Little by little, as we descended towards the great depression of the Dead Sea, with the mountains of Moab rising lofty beyond in the mist of noon, the air became heavier and the scenery more desolate until all trace of life vanished from the surface of the earth.

After a toilsome, joggy ride of several hours the line of hills we followed suddenly swooped down to form a vast circular hollow, cut through the middle by the slit of an abysmal ravine. From the heights commanding the declivity of the dip the walls of the fortified monastery of Mar Saba are scarcely visible, for the whole mass of construction is well within the ravine, clinging to its western side. Only the two watch-towers that flank the entrance peer out over the edge of the wadi.

When at last we arrived weary and thirsty, hoping to meet with a hearty welcome, we found the gates shut and barred, for even in our time the desert is full of unexpected dangers and fortified dwellings still turn to

*The Wadi el Kelt, showing the situation of the monastery of Hagios Georgos*

Henry C. Brewster



*The monastery of Mar Saba clings to the rocky side of the Cedron Gorge*

Henry C. Brewster



the outer world with distrust. After a bell had rung for some minutes, an old monk peeped through a hole in the great door and roughly asked us who we were and what we wanted, no hospitality, he declared, was ever granted to persons who failed to bear a letter of introduction from the Greek Orthodox Patriarch of Jerusalem. I had no letter, but realizing that this hostile attitude was mainly due to suspicion and to an anti-Jewish prejudice which, as I had noticed more than once in Palestine, existed among the Orthodox clergy as much as among the Moslems, I hastened to explain to the old monk in my best Greek that we were Christians and English, and that we had been living in Greece. This led to a friendly chat about his home in Greece, a topic which seemed to mollify him, for presently we were let in and received with open arms.

Mar Saba, like most of the early Christian monasteries of the East, belongs to the Greek Orthodox rite and its community consists of Greeks from Greece and of Greek-speaking monks from the Levant. At the present day they number scarcely more than thirty, although in the past there were times when several hundred inmates lived within the holy walls. But even now Mar Saba presents a certain degree of prosperity, and everything is kept in a relatively good state of repair, and by no means all the members of the monastic community are old and decrepit, for the monastery is used as a penitentiary for monks who have misbehaved themselves.

*Thin grass on the Wilderness of Judah offers a meagre pasture for sheep and goats*

Henry C. Brewster



Mar Saba is undoubtedly cut off from the world and, as far as I could gather from the more talkative ones, not all the inmates seem to enjoy its life of seclusion and fasting. When I ventured to express to the young monk who acted as our host all my appreciation and admiration not only for the stupendous group of buildings they inhabited but for the existence they led, away from the cares and worries of western civilization and from the clashes of blood-thirsty wars, he retorted with surprise if not resentment: "But Kyrie, this is a living death in an open tomb. Look at the walls that hold us within their grasp." I looked up, and indeed the height of the cliffs was imposing and the air close, breathless and overwhelmingly hot. The sides of the gorge were dotted with hundreds of caves and hermitages, at one time peopled by ardent anchorites. Evidently our young friend had not yet imbibed the true spirit of asceticism. He was eager to talk and hear from us news of the war. Many of his fellow monks, however, hardly noticed our presence and passed by engrossed in meditation or in the particular task assigned to them.

Mar Saba has always been a fortified monastery and up to this day it still offers protection against hostile tribes to the friendly Beduin shepherds of the district whose livelihood and existence are largely dependent on the benevolence of the monks.

Seen from the opposite side of the gorge the monastery stands facing you in all its pristine glory, a stupendous conglomeration of architecture mungling with rocky barrenness. In the centre is situated the Byzantine church with its flying buttresses. In front of it is a courtyard and a chapel, over to the left are placed the guest-house, the various annexes belonging to it and a series of rooms and small chapels cut out of the rock, while on the opposite side are arranged, in consecutive rows and superimposed terraces, kitchen gardens, narrow alleys, flights of steps and all kinds of buildings containing refectory, kitchen, bakery, dispensary, store-rooms and the private cells and apartments of the cenobites. The whole is surrounded by crenellated walls and sturdy towers built from the stone of the cliffs and growing out of the rock as if indivisible from it and forming with it, in the light of the setting sun, one uniform golden mass that stands out in contrast to the dark shadows of recesses.

The impression left upon the mind is one of great simplicity and splendour which, during the slow and fatiguing ride back to the uplands of Judea, accompanied me in the shape of a comforting and bracing vision.

# Gateways of the South Atlantic

by ALEX COMFORT

OCEANS have an identity and a uniformity of colour and substance no less than land—a sailor would no more mistake a part of the South Atlantic with its profound greenness, smooth like oilcloth and evenly spaced in ridges like corrugated iron, for the grey and white spiky water of the North Atlantic or for the vague shimmer of the Gulf of Aden than a landsman would confuse Norway with Cambridgeshire. And the transition is sudden, not gradual as one might expect. The South Atlantic has gateways where the character of the water changes within an hour of steaming. Scattered round its north frontier is the ring of islands and coaling ports, and its southern boundary lies not at Cape Horn and Delagoa but along a line from Cape Frio to half-way down the coastline between the Bight of Benin and the Cape. At Frio in the south the green ridges of water change to a cloudy blue, bottle-coloured nearer the shore, where the albatross is first met with on the voyage south. Round Frio there is nearly always a small clot of mist and bad weather, a miniature Biscay, and below that one gets the dry wind of the South American plain and occasionally, in the season, prodigious local tornadoes lasting up to an hour and frequently carrying off funnels or masts.

The southern border is not so impressive on the northward trip, as one is only just out of the mud around the Plate estuary, where the water is tea-coloured. But going southwards from the channel the gateways are impressive because palpable.

I recall coming into Funchal Bay, in Madeira—the northernmost gatepost, if one discounts the Azores, which I know only as a flock of low-down slate clouds along a skyline—on a Sunday morning very early. The mist going up did not show the island until we were close, and then our bow wave touched it, going out across rolls of water level and marked with a continuous green netting pattern. It had walls running up to unknown heights in mist, dotted with white patches which might have been snow

or flowers but were houses.

Cabo Girao goes up quietly into mist, a 1900-foot billiard table, ledgeless, rather dwarfed by the mountain and the vapour, with small white flecks of water running up its discoloured base. Under the mist line the valleys come down to small beaches with weed and a few rocking boats, lying between high corridors of cliff or on small yellow streaks of sand.

The point before Funchal has a crop of feathery trees and a hulk moored off it. The town trickles down like a white viscous fluid, a glacier, out of the mist across a number of mountain spurs, among a thick vegetable fur, which in the early morning is grey, but when the sun is up dazzles with green and huge domes of flowers.

The water even so early was blue, as if a bucketful would keep the colour, and one could see the sand. Here, more than at any of the other gates, the landfall is a smell not a sight, an odour of plants as typical as the smell of the sea when one has crossed a continent. On this morning the President's yacht lay among the bumboats, very neat, and a small cruiser was loading fish-boxes onto the after deck.

We were due to coal before dark, and everyone was impatient because the doctor and the customs had not come to claim their bribes, which we had ready to lower on a string. They were on their way when a bugle blew on the warship, and twenty-one shotted rounds were suddenly fired over our heads, out to sea, followed by another twenty-one from the fort. Some rockets went up ashore, and then, at the signal, rifle and machine-gun fire began to flash up in the wooded ravines. The windows of the hotels shot up, and Sunday began. Nobody in the town cared a damn for the fighting overhead. There was a revolution going on about the price of milk, but the tug *Falcao* and her crew of Robinson Crusoe stevedores were undeterred and spent much of the day trying to burgle our cabins, while we ashore drank

lager at the bathing-pool and tried to sink into the blue mirror of tree-reflections off the point, watching our ship's hull get lower as she coaled, her siren calling off new barges every now and then. The gatekeepers were still fighting when we sailed.

We were shadowed for some time by a shipload of "schoolmarms, proper old battle-axes" as the skipper described them, but shaking them off, we went on to the inner portal. Beyond Madeira the sea is still blue and choppy like the bay. The South Atlantic does not begin yet, but the water is luminous at night.

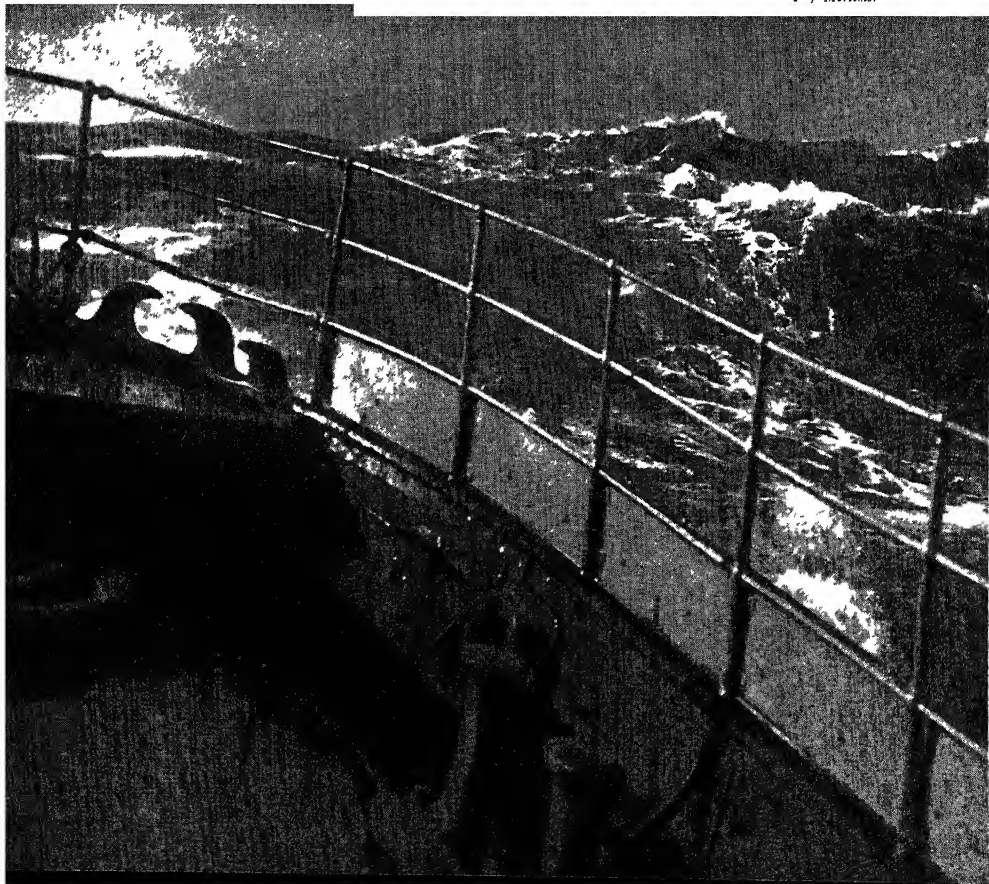
The gateway—and it is truly a gateway—comes up slowly as a dense smoky blur on the skyline ahead, divided into two clouds, with mist between. Then the Cape Verde Islands appear very gradually, San Vicente to port, San Antao to starboard, so utterly different

from the banana commercialism of Madeira with its rope railways and bullocks. The sea round them is a poisonous shade of green, but everything else is red or brown, its colour pulsing like the colour in a coal.

San Vicente is a low, straggling mass of teeth, fags, stumps and peaks, sprawling like the nodular top of a biscuit, red and terracotta-coloured, with yellow veins and streaks in it, cut out of painted stuff canvas. This low petrified swell of rock runs far eastwards, ending in long crusts and spits of sand floating in the water and rocking with it, with a tall cone like an extinguisher as their final eastward period.

In the elbow of the strait is a black mass of rock, white on top, with a minute white pinpoint which might be a bird sitting on the side. This is the lighthouse. Beyond is a row of barrack-like buildings ashore, a gas-

*F J Mortimer*



works and a fluctuating strip of sand, with four palms, tall, dusty ones, the only vegetation on the island. But on the other side of the strait San Antao stands, an enormous erect mass of red rock, its bottom surrounded by drifts of spray like steam, its sides black and red and mottled with sulphur, and falling in cascades of irregular blocks.

I remember vividly a gull which crossed one of the folds of the cliff, a suspended planing white dot, traversing a crack which would have contained our tramp. There are enormous valleys of hot rock, with unscalable sides, and their ends choked with stones as big as houses, running up to meet receding faces and curtains of rock far inland. To walk in them would be to know how an ant feels traversing a basin of lump sugar.

Down the strait one meets other traffic coming and going, its code set for the Bird Rock signal station, and one looks for the red and yellow flags of the repeat hanging over the castellated wall of the station. It is hard not to look apprehensively into the middle of the rocks when a vista opens and expect to see columns of rock or red-hot stones shooting noiselessly skywards. It is a silent place, but one feels it to be the deafening silence which surrounds a locomotive blowing off steam—a silence of too much noise, not too little.

On San Vicente, after the town is passed, one sees a series of bitten-out rock amphitheatres, with smooth sides, sloping up to vanish inland. Behind the massif of San Antao are pillars and screes coming down to a low irregular plain filled with vast blocks which have fallen.

Rain blows up the straits but never falls on the islands. By this time the ridge topping San Antao is usually of an unutterable blue with red fire under it. And here one meets the South Atlantic, as one steams out of the strait and encounters a line of regular green head-and-stern rollers, not crested, with even troughs twenty feet deep, like magnified rings from a dropped stone in a pool. They accompany one, with soft cotton clouds whose tops appear first over the horizon, as far as Cape Frio.

Of the other gates, there is Dakar on its green low hills, with its very white buildings and endless yellow beach, and Goree Island just beyond, covered with tall houses like the

back streets of Cadiz or Marseilles. It reminds one a little of a piece broken off the residential part of Bath. Ashore there are mimosas and gigantic butterflies and wasps, with proportionately minute finches, and the houses are short and white, with glassless, very French shops.

In the south, Fernando Noronha with its preposterous pinnacle of rock, which may fall at any moment, steams like a Turkish bath, full of Brazilian convicts. Saint Paul's Rock, which very few people see, is a low clump of stones, the top of a cairn, whitened with droppings and under a continual cloud of whirling birds, cape pigeon and mollyhock chiefly. There are some mysterious outposts, too, which ships have sighted but never rediscovered, clumps of bird-covered rocks or breakers, or single black pinnacles just avoided in fog. But I have never seen them.

The South Atlantic is vast although it conceals its vastness inside its horizon, as a cinema film conceals its length, and one does not see all of it at once. But beyond Fernando Noronha one is only a day's steaming from the green hills and reddish cliffs of Brazil, with palms jostling one another over the edges.

But the most striking gateway is that of the Hesperides. I was called up to see it at four in the morning, knowing it till then only as a distant arrow of pink sugar standing above a cloud-bank fifty miles away. There was a low cloud over this strait, and I could just see beaches on each side of us. Then the sun came over the saw-edge of Gran Canaria, and the mist began to roll down the sides of the other island in long trails like beads of sweat. Suddenly the cone appeared, delicate pink and ribbed like a parasol, with clouds crossing it, the Head of Atlas. Down below the mist was pouring stickily through trees whose blossoms I could smell. It flowed into the sea and vanished, leaving a tall trail of smoke going up for breakfast from Sta Cruz de Tenerife.

One of these days I am going up that peak. When this war is over and one can go back to the South Atlantic it will be by way of the Canaries—not seen from large decks as most people see them, but from low down, close to lively water—that I shall try to go. It is a good thing to begin again at the point where one left off.





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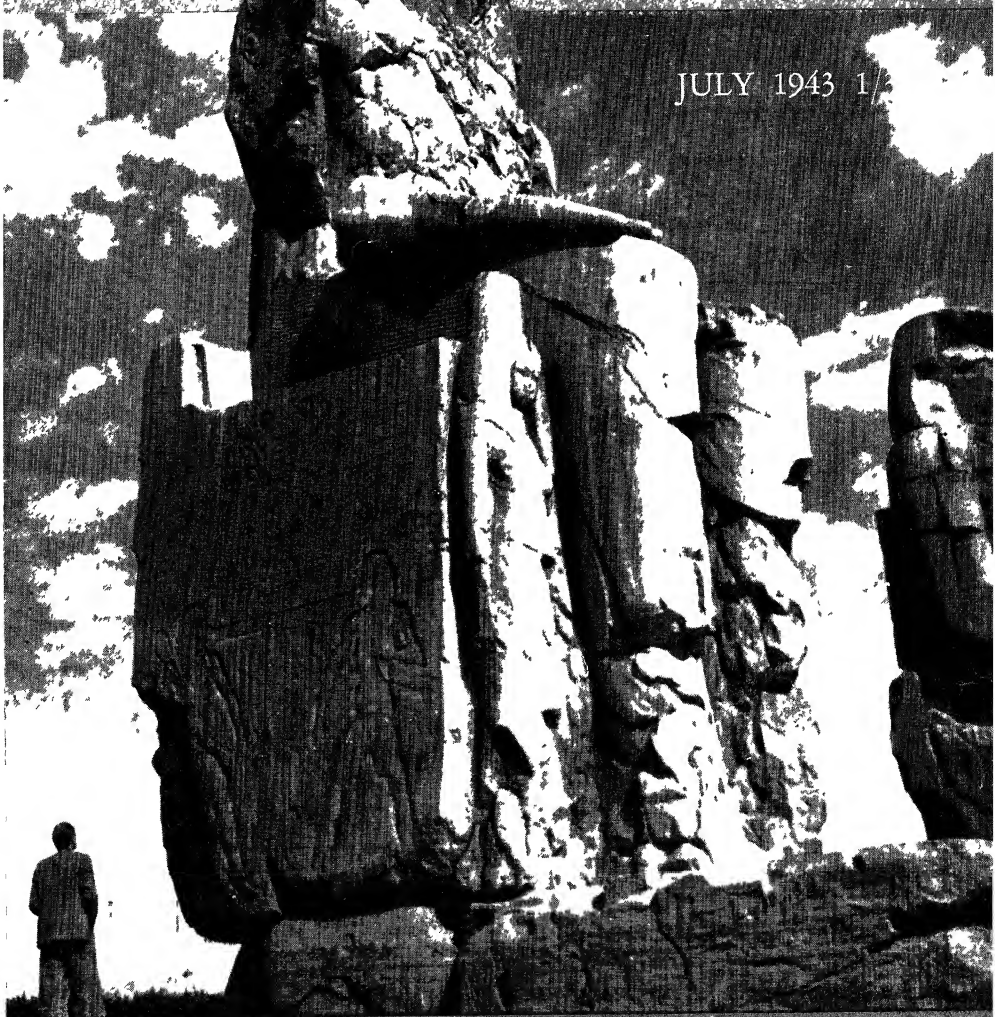
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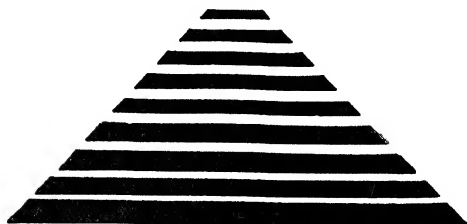
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# Air Power and Geography

by SIR EDWARD L ELLINGTON, G C B, C M G, C B E

*As a sequel to the series of articles we recently published on Sea Power we now present a statement of the case for Air Power by a Marshal of the Royal Air Force who shows the conditions and materials on which its successful development depends, particularly in relation to the geography of the British Empire*

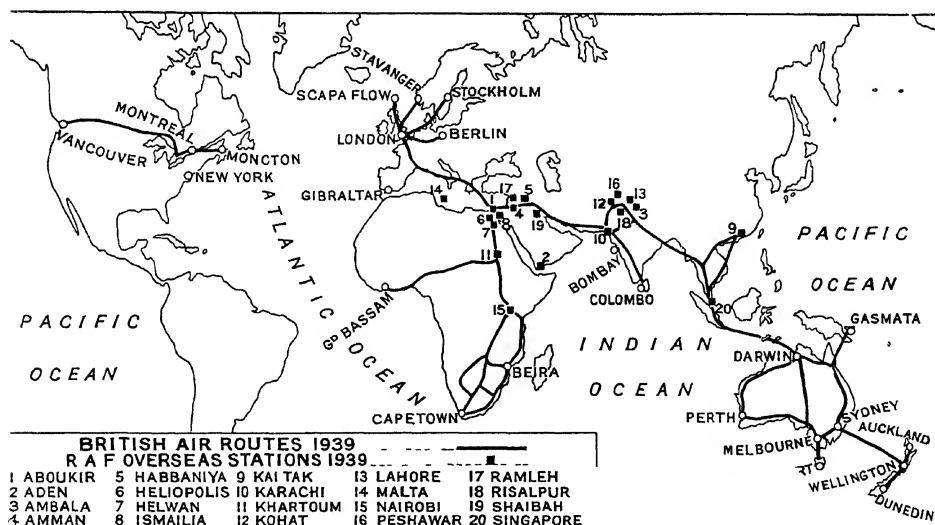
FORTY years ago the first aeroplane was flown by the Wright brothers at Kittyhawk in America. It was not long before the uses of this invention attracted the attention of those whose profession it was to study war. For the first time since warfare at sea began a fundamental revolution in warfare had taken place: operations could in future be carried out in all three dimensions.

Since there are only three dimensions so great a revolution can never take place again. This is a matter of the greatest importance for the defence of any country, for the power which first evolves a sound three-dimensional strategy will lead the world in warfare, and with adequate forces should be unassailable. To the British Empire, with its widely separated parts and its strategic centre on a small island hitherto held together by sea power, it is of greater moment than probably to any other power.

An aeroplane can not only work in a great

number of layers of the atmosphere above the surface of the globe, but, since its movement is not restricted to one part of the earth's surface, as is that of ships to the sea, and is not affected by accidents of the ground, such as mountains, rivers and deserts, as are armies, it is free to move where it will. Nor can it be stopped by obstacles such as fortifications and minefields, and there is no effective passive defence against its attack by which time can be gained for reserves to be moved to a threatened point or dispositions to be modified to meet an assault which is developing.

There is no analogy between defence against aircraft and defence against an army by means of outposts or advanced guards with supports and strategically placed reserves, and defence afforded by cruisers and destroyers screening a battle fleet. The only defence is counter-attack by other aircraft: either the tactical counter-attack of fighters or the strategical counter-attack of bombers.



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Since the object of all commanders in war is to break the enemy's will to continue resistance by depriving him of the means of doing so, it may be that the attack of the bomber, if carried out in sufficient strength, by acting directly against the centre of the enemy's power will alone prove decisive. Hitherto the destruction of the enemy's armies, interposed between the centre of power and the attacking forces, sometimes supplemented by starvation through blockade, has brought wars to an end. But there is as yet no historical data from which it can rightly be judged how far an air force alone can force a decision.

What are the requisites for the development of air power? First, adequate resources of suitable man-power to be trained as crews or for maintenance duties. Secondly, large engineering resources and supplies of raw material which can safely be made available are necessary so that an air force can be equipped. Thirdly, since defence against aircraft requires room for the interception of the attacking forces before they reach their targets and for the dispersion of resources in order to minimize the damage caused by those of the attackers which penetrate the defences, a great extent of territory is wanted. Provided this territory contains all the resources necessary, the more compact it is the better.

#### MAN-POWER

Now British sea power, on which the safety of our Empire has hitherto depended, is a result of the geographical position of the United Kingdom which has caused a large proportion of its people to depend on the sea for a livelihood. Since the discovery of the New World the Englishman has spread all over the globe in search of trade and profit and in so doing has developed a great mercantile marine and also those qualities which make good seamen. So that when a navy was required to protect our commerce, human material and technical experience second to none were available to make and man a fleet. Furthermore, our climate, with its open weather throughout the year, and the innumerable harbours and inlets of this land, has bred a race inured to the sea from childhood.

Quite other has been the history of our air power. War followed on the invention of the aeroplane so soon that its commercial uses could not be exploited before the forcing-house of war fostered its military qualities at the expense of its civil qualities, and turned the thoughts and actions of the young men of the United Kingdom and of all Europe to

the air in a way which would not have happened in a hundred years of peace. For the natural growth of a widespread aptitude for flying in a people, the conditions of their normal life must supply the urge to fly. The most valuable characteristic of the aeroplane is its speed, its speed through the air supplemented by its power to fly 'in a bee line' between two points, and the greater the distance a man wants to go the more valuable is this quality. Consequently a small country with a long-established civilization and a fully-developed road and railway system is less likely to breed a race of airmen than a new country of wide extent. For this reason it is to be expected that air power will develop more readily in the big, less densely populated, or less fully developed, countries than among the older and more congested territories such as those of the European nations. Fortunately for our Empire it contains countries where all favourable conditions exist, and it is no accident that the men from the widespread Dominions have contributed a greater proportion of our airmen than of our seamen or soldiers. The Empire Training Scheme in Canada is evidence of this.

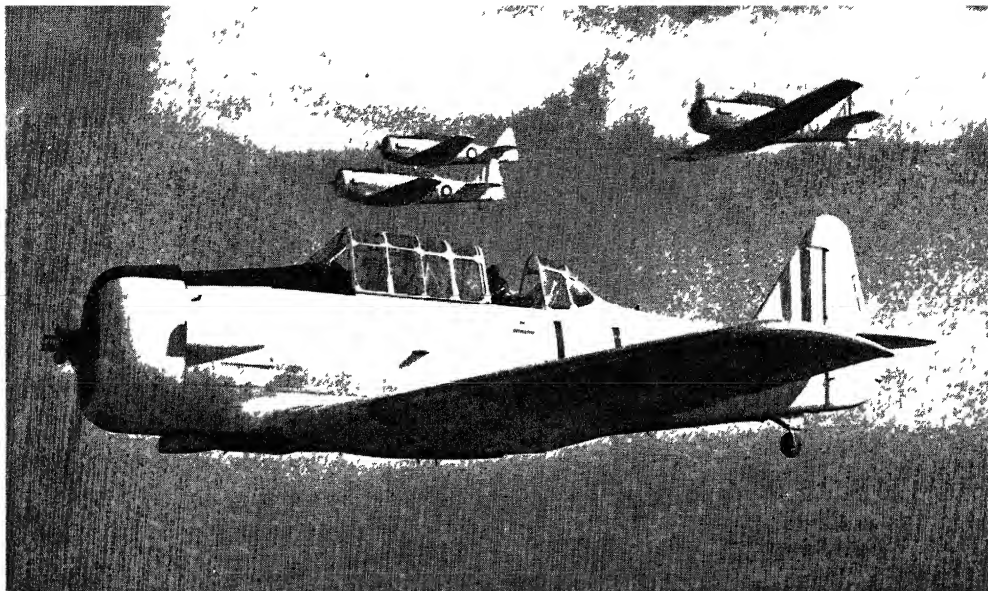
#### ENGINEERING RESOURCES AND RAW MATERIALS

As for the second requisite any industrial country with good sources of power and access to the necessary raw materials, the principal of which are, at present, aluminium and high-grade steel, can develop an aircraft industry, and the men in the engineering industry will supply skilled mechanics for maintenance work. Although the motor-car industry, because it makes use of the light internal combustion engine, is particularly suitable as the basis of aircraft manufacture, any engineering factory can be easily adapted for making aircraft. The cabinet-making industry, too, has its contribution to make in the provision of training machines and such special aeroplanes as the Mosquito.

#### WIDE TERRITORY

Adequate space is most important. The principal protective weapon against air attack is the fighter aeroplane, and at the present stage of development the single-engined single-seater fighter dominates the battlefield and has proved itself more than a match for any other type. This superiority arises from ease of manœuvre which enables fixed guns to be used, and a greater number of fixed guns can be used, or fixed guns of a larger calibre can more easily be installed, than movable guns such as are required by

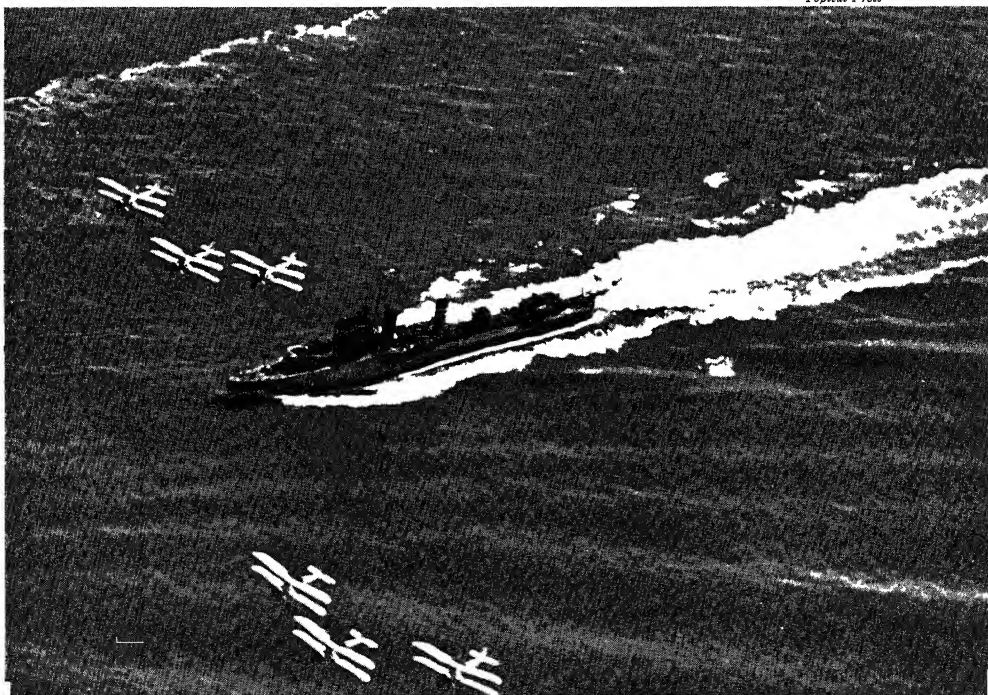


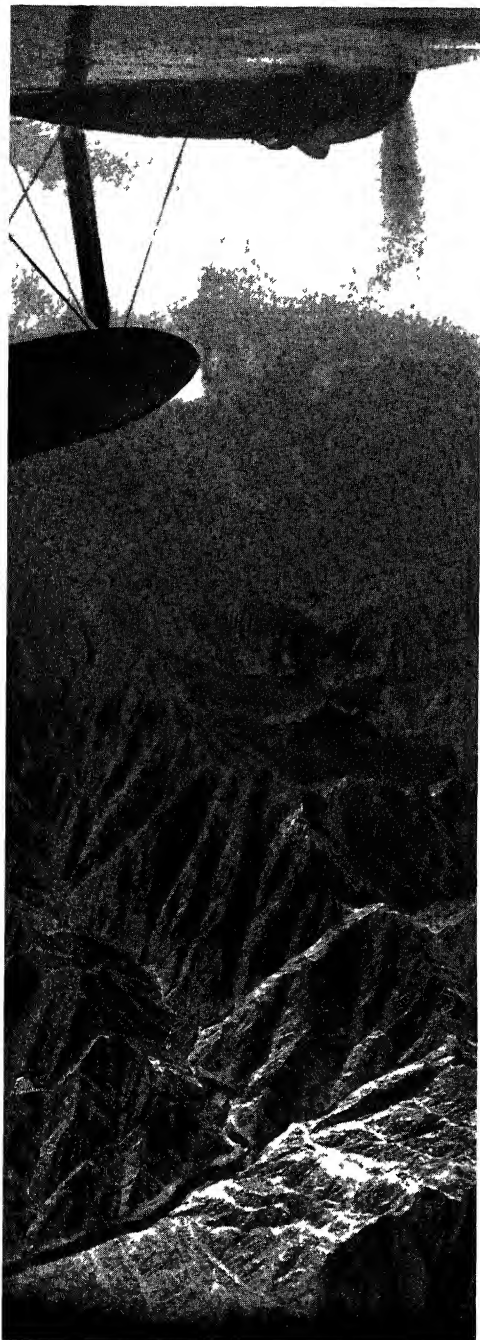


*By courtesy of the Canadian Government*

Canada, with its wide spaces out of the enemy's reach, is an ideal country for all but the final stages of training the Harvard (above), an American aeroplane modified to suit R A F requirements, has proved a most successful trainer (Below) Ship-borne aircraft are now part of the Royal Navy. Most of them operate from Carriers. The biplane with its greater wing surface and lighter wing loading has survived longer in the Navy than on shore on account of easier landing.

*Topical Press*





*By courtesy of the British Overseas Airways Corporation*

the less manœuvrable and heavier types of aircraft. But in order to preserve its manœuvrability, the single-seater fighter must be kept light, and a heavy weight of fuel cannot be carried. In consequence its range is short and it must normally be kept on the ground until attacking aircraft are known to be approaching.

In order to get notice of their approach a warning area is necessary, and the higher the speed of the approaching aircraft the greater should be the warning area. Radiolocation no doubt has done much to reduce the disadvantage of a small warning area, but it is not infallible, and if the attacking aircraft can start from bases only a short distance from their enemy's country, the warning given by radiolocation is all too short, as is evident on the South Coast of England today. Since the enemy can approach at any height from sea level to 40,000 feet, no defence, however great its scale, can intercept all enemy aircraft before they reach their targets.

In order to minimize the effects of the bombs of those aircraft which penetrate the defence, wide dispersion of aerodromes, factories and depots of reserves and stores is necessary, or they must be withdrawn beyond the easy range of the enemy's air forces. Further, the training and the supply organizations necessary to maintain the operating squadrons up to strength is large, probably three or four training or storage aerodromes are required for every operating one, and as no two landing grounds can be very close, lest the aircraft using one interfere with those using another, and since much country is not suitable for the making of landing grounds, a wide extent of territory is necessary for the development of an air force.

From this it will be seen that great countries like Russia and the United States of America are best suited for the natural growth of air power. The British Empire with its widely separated parts provides many alternative areas for dispersal, and especially are the conditions in Canada and Australia suitable. But the communications between each part, and above all those with the United Kingdom, where at present are situated the main industrial resources and the centre of political power, must be made secure.

*The route to India used by British Overseas Airways before the war ran along the Arabian side of the Persian Gulf and across the Oman Peninsula. This was substituted some fifteen years ago for the earlier route along the Persian Gulf*

## PROTECTING COMMUNICATIONS

This leads me to oversea communications and the effect of air power on their security. Before the advent of air power a centrally controlled navy secured such communications for all those powers the component parts of which were held together by keeping the sea ways open for merchant shipping. This protection was given by light craft, while fleets of heavy ships were strategically placed so that support could be given to the light forces if the enemy attempted to prevent them from carrying out their work. Since navies only move in two dimensions, a central position could usually be found from which an enemy fleet could be brought to battle, if it attempted to interfere with the forces protecting the merchant shipping.

The position of the Grand Fleet at Scapa Flow in the war of 1914-18 is an example of this. But the sinking of the *Prince of Wales* and *Repulse* off Malaya, and the battles in the Pacific, have shown that without air superiority even capital ships cannot operate within reach of the enemy's aircraft without serious risk.

But the restriction put on the aircraft designer by the conditions in which aeroplanes in carriers are used (such as limit in dimensions, ability to land and come to rest within the limits of the landing deck), result in carrier-borne aircraft being somewhat inferior to their land-based contemporaries, and the carriers themselves are very vulnerable. From this it follows that fleets with the assistance of carriers alone will rarely be able to establish air superiority within range of the enemy's air bases, and the protection of the merchant ships in these areas against the attacks both of surface craft and aircraft will have to be provided mainly by aircraft. This is especially true within range of the single-seater fighter, which, as I have shown, at present dominates the fighting in the air.

Although air transport is increasing in importance, it is unlikely that the aeroplane, as we know it today, will generally replace merchant ships in carrying materials across the sea, since the weight of fuel to be carried is out of proportion to the useful load. Consequently, the routes used will have to be those which are out of effective range of the air bases of potential enemies, and where this is not possible bases must be established from which the ships can be protected and an enemy's attack neutralized.

Merchant ships are not only threatened by the surface raider and aircraft but by the submarine also, and the experience of this and the last war has shown that aircraft are

essential both for attacking submarines and for assisting escorting vessels to deal with the menace. For this purpose air bases are necessary from which aircraft can patrol the shipping lanes, and areas beyond this range require carriers to supply the air cover. As the range of aircraft increases these areas will contract and the need for the carriers will be reduced.

## AIR BASES

Although the range of aircraft is increasing, and it may not be long before aircraft can fly round the world without refuelling, it will always be necessary to have bases at comparatively short intervals on two grounds: economy of fuel and to provide places of refuge, repair and maintenance.

The requisites of an air base differ materially from those of a naval base in the past. Formerly a compact area easily and economically defended containing a good harbour was what was wanted. But air bases must afford room for a number of landing grounds not too close together and be capable of defence against the scale of attack, both by air and land forces, to which it is exposed, and this scale, as far as air attack is concerned, will depend on the distance of the potential enemy's air bases. If the enemy is within single-seater fighter range, a large area is necessary so that a proper air defence can be developed and dispersion be possible. Or friendly territory must be within reach from which aircraft can operate, using the base as an advanced refuelling place. Otherwise an enemy will be able to establish air superiority over the base and capture it by airborne or oversea attack, or by a combination of both, as was proved by the capture of Crete in 1941.

As far as defence is concerned, the distance apart of such bases depends on how much of the sea route passes within short range of the enemy's aircraft. Wherever the route passes within range of an enemy base from which the single-seater fighter can work, a base is required from which the defending aircraft can neutralize the enemy, otherwise the bombers and torpedo aircraft working under cover of the fighters will take heavy toll of the merchant ships and their escorts. Where the distances are greater the threat of the enemy's long range aircraft can be dealt with by carriers or by long range fighters.

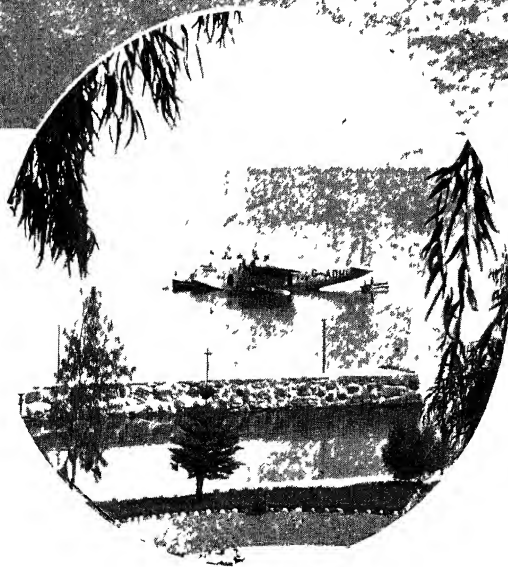
## HOW DO WE STAND?

In the light of what I have said, what is the position of the British Empire?

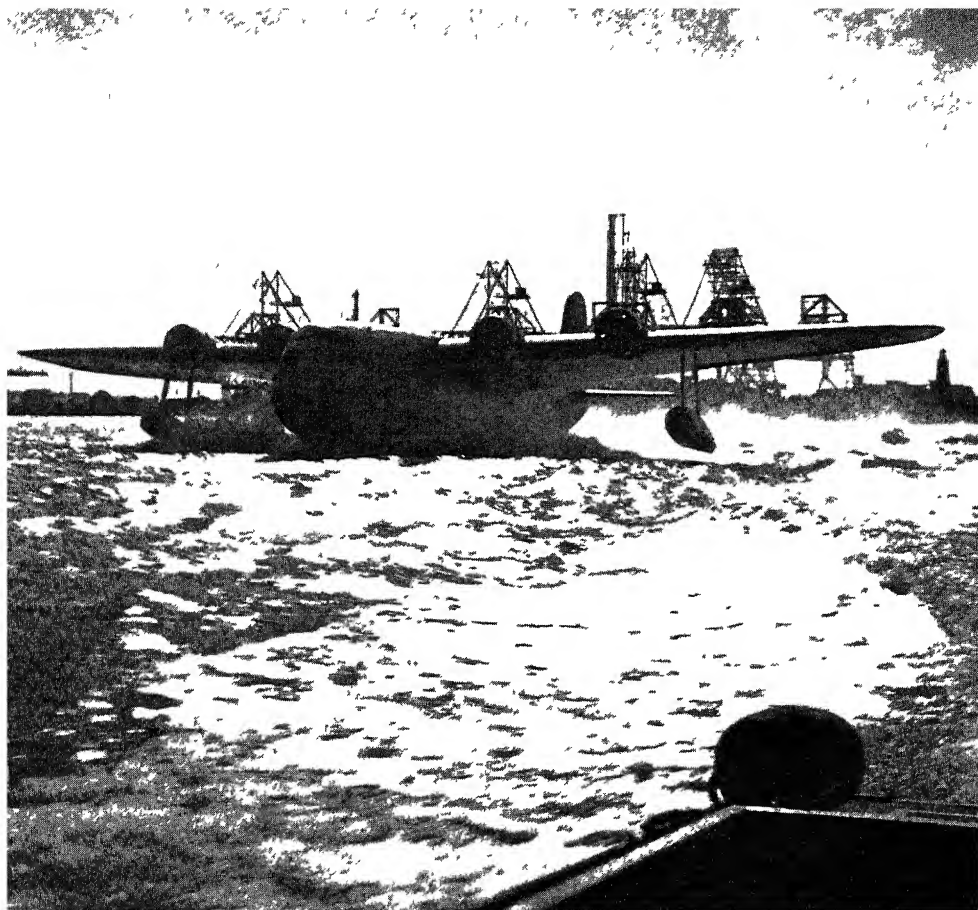
First there is the heart of the Empire, the main base of its munition supply where is the great bulk of its white population, situated on



*By courtesy of the British Overseas Airways Corporation*



*The Sea of Galilee, shown in these two pictures, and Lake Habbaniya, west of Baghdad, are the only two alighting places used by flying boats between the Mediterranean and the Shat el Arab at the head of the Persian Gulf (Opposite) Egypt has been called the Clapham Junction of the air routes to the East. Alexandria Harbour provided a good alighting place for flying boats of the British Overseas Airways and was at the parting of the routes to South Africa and to India.*



*By courtesy of the British Overseas Airways Corporation*

a small island within close range of the Continent. This is not easily protected from air attack, and the Channel is little more than a tank obstacle to an invading army. There is inadequate room for developing a training organization of sufficient size for the air force necessary for the defence of the United Kingdom itself and the overseas possessions of the Empire. Although the munition industry, based largely on coal supplies, is generally situated in the less vulnerable parts of the country, all is within reach of a determined bomber force. Consequently air forces sufficient to prevent an enemy from gaining air superiority over the Channel and South of England are essential, and much of the training organization which is necessary to maintain these air forces in war must be relegated to those parts of the Empire which are least exposed to attack. Canada, where there is

almost unlimited room and large resources of raw material and manufacturing capacity at hand or in the United States, is the most favourably situated of the Dominions.

Since air bases are available within short range of the south and south-east coast of England little warning of attack can be obtained, consequently these air forces must contain a large number of fighter squadrons in order to ensure that a considerable number can be kept in constant readiness in war without over-working the whole. A big bomber force is necessary for defence by counter-attack in order to prevent a dangerously large force of enemy aircraft from using the bases within easy reach of this country.

#### SUPPLY ROUTES MUST BE SAFEGUARDED

The United Kingdom does not contain many of the raw materials necessary for





*By courtesy of the British Overseas Airways Corporation*



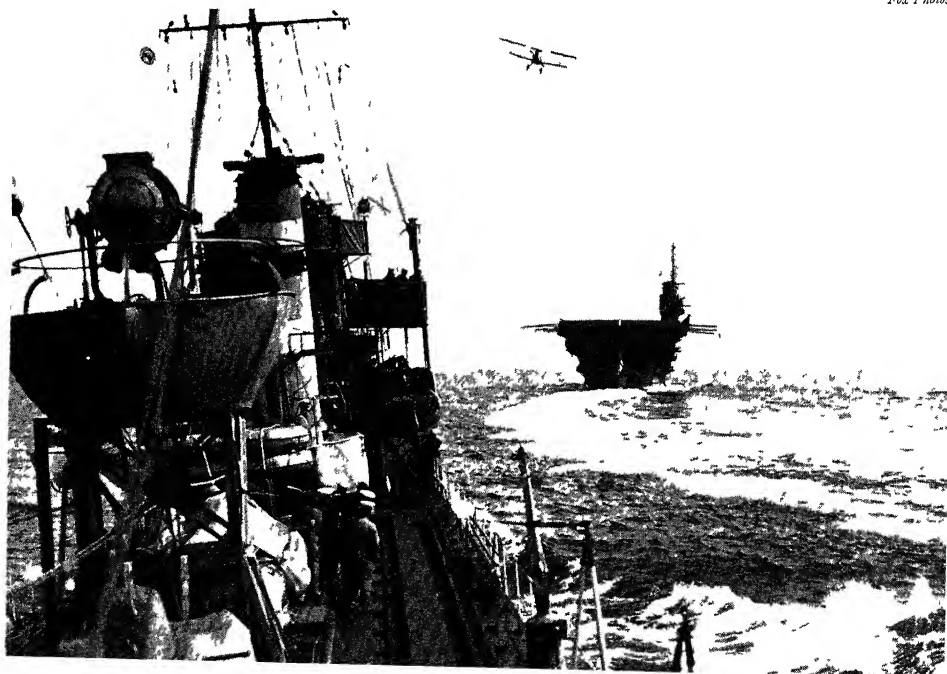
*By courtesy of the British Overseas Airways Corporation*



*Exclusive News Agency*

*Qantas Airways, operating the stages of air routes to Australia lying between Singapore and Australia in cooperation with British Overseas Airways, used Sydney Harbour (above, left) as their terminus up to 1939 (Top, right) The Citadel at Cairo To the left lies the desert near the Suez road which provides good landing grounds The Nile above the Barrage at Cairo affords an alighting place for flying boats en route to the Sudan (Bottom, right) Gibraltar Harbour, long used by flying boats, has since the collapse of France become an important landing place en route for Africa in spite of the indifferent and only airfield on the racecourse to the left of the picture (Below) Carriers provide a movable base for aircraft supplying air support out of range of shore bases*

*Foca Photos*





munition production, such as oil, bauxite, tin, nickel, copper, and can only grow a proportion of its food requirements. Consequently at least the Atlantic sea route must be protected against prohibitive loss of shipping through submarines or air attack in order to prevent the centre of the Empire from being starved of food and raw materials. But to be able to reinforce the other parts of the Empire in the event of attack, or to enable their resources in men and material to be used where most wanted, other routes than those crossing the Atlantic must be protected.

First in importance is the route through the Mediterranean to the Levant and on by the Red Sea to India and Australia, and the air route via Baghdad and the Persian Gulf. Its protection against air and submarine attack along the west coast of Europe and through the western and central Mediterranean is a matter of very great difficulty since it is obviously impracticable to secure bases in France and the Peninsula, and the experience of the war has shown that the Axis has obtained assistance in this part of the world. The distance of Gibraltar is inconveniently long to be covered by the defence forces using bases in England, and Gibraltar is a most indifferent air base, difficult to defend from air attack except by A.A. guns and deep shelters in the Rock. On the African shore there is Tangier, once a British possession and now nominally an international one, the control of which the Spaniards have assumed. It is, however, small for an air base. The suggestion previously discussed for exchanging Gibraltar for Ceuta might be reconsidered, for Ceuta with a sufficient hinterland would be a good air base from which to protect shipping as it passes through the Straits of Gibraltar.

Next comes Malta in the central Mediterranean. The war has shown how costly it is to defend it against strong air forces based in Sicily and Italy without the power to use the African coast for aircraft supporting its defence. Until Cyrenaica was occupied by the Eighth Army, Malta was more of a liability than a material asset, however inspiring its heroic defence has been, but once it could be used as an advanced base it has proved invaluable for the attacks on the Axis communications.

The Aden Protectorate is already an air base and has sufficient room for its defence, and as neither shore of the Red Sea is held by powers having the resources to threaten the British interests, the southern exit of the Red Sea is sufficiently protected by Aden. Thus the route to India is secure, and that Empire has,

of course, all the room and resources it needs for developing an air force capable of defending the country and routes round its coasts.

When Burma, Malaya, the Dutch East Indies and the Philippines have been recovered, it is presumed that they will be placed under the protection of the British, American or Dutch and will thus enable the route to Hong Kong and the Far East to be protected. The same countries will enable the route to Australia to be secured. Once the Japanese have been driven out of the islands they have seized and have been deprived of the mandated islands they have fortified contrary to their undertakings, the Pacific route should be free from threat. Thus the most difficult problem in connection with the future protection of the British Empire is the securing of the route through the Mediterranean. Once this has been done, the establishment of air bases by the British and the Americans on territory already in their possession before the war should secure the routes between the British Empire and the U.S.A. on which the maintenance of the peace of the world would seem in the future necessarily to rest.

#### A DIFFERENT PROBLEM

The effect of the increase of carrying capacity on civil transport aircraft differs greatly from its effect on military aviation, for though much of this capacity must be diverted to increasing fuel capacity for routes over the wider ocean spaces, where they have to be crossed direct in the interest of speed, a civil air service has to attract custom and pay its way. Since nothing is so uneconomical as the carrying of unnecessary fuel, stages on most civil routes are made as short as possible so that all available carrying capacity may be diverted to pay load. For this, bases at frequent intervals are required and should be selected where passengers and freight can be most readily secured.

Before the war a stage of about 300 miles was the average on the long-distance routes, increasing over the sparsely inhabited countries and decreasing where there were frequent places *en route* at which passengers wanted to join the aircraft. Considering the number of aerodromes which have been constructed during this war by the belligerents in every country except Spain, Portugal and Sweden, there should be almost an embarrassing number to select from. Provided some international agreement can be reached about the freedom of transit and landing, it should be easy to establish civil air routes all over the world.



## Alaska's New Naval Base

by ISOBEL W HUTCHISON

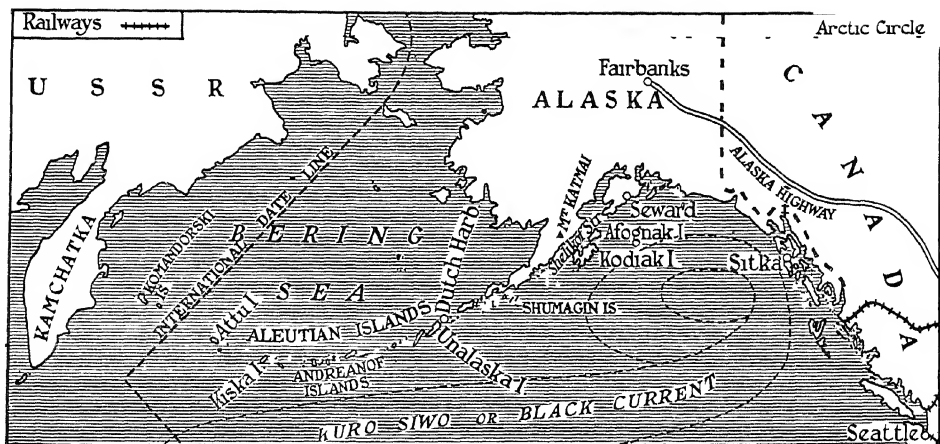
It was when plant-hunting for the British Museum on the Aleutian Islands in 1936 that chance landed me for a couple of weeks on the island of Kodiak. Like the late Dr Knud Rasmussen, who rejoiced that he was born before the dog-sledge became obsolete, I count myself lucky to have seen this remote beauty-spot of the North Pacific in its primitive freshness, before the clang of war-time activity had turned it into a 'boom' town and covered its flower-strewn mountainside with tents and Nissen huts. For since 1939 Uncle Sam has been pouring men and money into his 'attic' in a determined effort to close the skylight.

In the defence system of Alaska, a territory which three years ago was so unprotected that its Governor declared it could be captured by twenty Japanese parachutists, three important naval bases have now been established. Dutch Harbour (always a small base for the

Bering Sea Coastguard Patrol), Sitka, and Kodiak on the island of the same name.

Of these three bases Kodiak is the largest and the most important. It has been called the Pearl Harbour of the north and is about the same distance (some 3300 miles) from Japan. Dutch Harbour is several hundred miles nearer. As long as the Japanese continue to occupy Kiska at the other end of the Aleutian chain, Dutch Harbour and Kodiak are the nearest North American bases to Japan. It must be remembered, however, that landings were made by United States troops last autumn in the Andreanof group of the Aleutians, which lie between Unalaska and Kiska, thus giving American bombers a new springboard from which to attack Kiska and Attu, both of which were undefended when the Japanese seized them in June 1942.

In addition to its important strategic position as a base for attack on Japan, Kodiak is



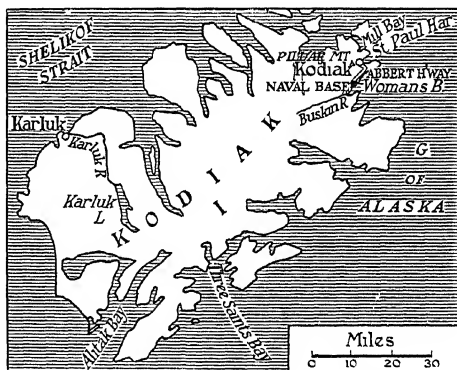
Stanford London

only 510 miles by air from Fairbanks in central Alaska, the present terminus of the new International Highway from Edmonton. The naval base at Kodiak thus guards the line of supply to Alaska, Russia and China.

The harbour is an excellent one, practically landlocked by islands, and said to be large enough to accommodate at need most of the US fleet. So rapidly and secretly has work at this base been pressed on that an American Admiral reported it to be in readiness for "Offensive or defensive action" more than a year ago, greatly in advance of anticipation.

Though it is Alaska's second largest island, Kodiak is very little known even to Alaskans, for it lies off the regular steamer track from Seattle to Dutch Harbour and the Bering Sea. It can be reached in less than two days from Seward on the Alaskan mainland, which is seven or eight days' sail from Seattle. But when I visited Kodiak by this route in 1936 I found that the journey from Seattle might take nearly as long as a trip round the world if one missed, as I did, the monthly boat at Seward.

I betook myself to a small hotel in the main street of this little Alaskan port, to await the next sailing for Dutch Harbour with what patience I could muster. "If I were you," said the sympathetic hotel proprietor, dexterously prizing the last nail from the lid of the big wooden crate which contained my botanical outfit (for I intended to botanize at Seward also), "seeing as you've lost the *Starr*, I'd go down to the steamship office and see if I couldn't get a passage on the *Curaçao* as far as Kodiak. *Curaçao*'s due in, one of these days."



Stanford, London

"Kodiak, where's that?" I inquired blankly, for I had never heard of the place.

The hotel-keeper looked at me disparagingly, then, deciding that a mere *Cheechaco* couldn't be expected to know much about Alaska anyway, he explained.

"Waal now, Kodiak—it's an island. Come to think of it, I should say 'bout the biggest island in Alaska. And it lays out there in the Gulf. No, it's not one of the Aleutians, but it's on the way there. Boats reach it from here inside a couple o' days but there ain't many goes. But if it's flowers you want, you'll get better flowers at Kodiak than at Dutch Harbour, or Seward either for that matter. Plenty of baars there too. Kodiak's the home of the biggest brown baars."

I decided to take my host's advice.

When I visited the steamship office, the clerk, who was in a hurry, brushed aside all hesitation and booked me without more ado.

for a passage on the *Curaçao*. Thus it was that on a June morning some days later I embarked for an island I had never heard of, fortified by the assurance from the clerk that there was a hotel there, "Or if there isn't, you'll find somewheres to go."

I found the small vessel already crowded with sallow-skinned Filipino lads bound for the salmon canneries. Fifty years ago Karluk, on the west shore of Kodiak, was the largest salmon cannery in the world, and the Karluk River, only sixteen miles long, was one of the most famous salmon streams. Millions of fish struggled up this small waterway at the spawning season to the Karluk Lake, and the river was a solid mass of fish from bank to bank.

Not only do salmon flourish on Kodiak, but the delicious salmon-berry (*Rubus spectabilis*) and other wild fruits grow there to an outsize. Berries, as well as fish, constitute the chief part of the diet of Kodiak's most famous inhabitant, the great Alaskan Brown Bear. This monster, the largest carnivore in existence, grows to a greater size on Kodiak than elsewhere in Alaska. The record pelt taken measured eleven feet three inches, its owner tipping the scales at fifteen hundred pounds.

The Alaska Game Commission recently estimated that the bear-population of Alaska considerably outnumbers humans. Of about 93,500 animals, 75,000 are Black Bear, 8,500 coastal Brown Bear, and about 10,000 Grizzlies and Brownies in the interior. When compared with the latest human census, taken in 1940, this gives a preponderance to the bears of about 20,000.

The coming of war to Alaska, however, bids fair to upset this preponderance. Though stringent game laws were already in force, limiting to two the annual bag allowed to hunters of the Brown Bear, this has recently been reduced to one. Despite this, owing to the influx in the last three years of thousands of workmen and army personnel, wild life in the territory is seriously endangered. Writing in a recent number of the *Alaska Sportsman*, the editor remarks:

Just how great is the illegitimate taking of game is difficult to determine. It is evident however in the statements of fishermen, miners, defence workers and soldiers, who make such remarks as "Well, I killed two deer on the beach this summer," or, "I shot my first bear this year," and the fact that many outdoorsmen report finding dead bears, deer, beavers and other wild life near the boom towns. This summer [1941] one man was shot—out of season for any game animal—when mistaken for a bear

by a hunter without a licence. Many do not know licence requirements or the first thing about sportsmanship. The limited number of wild life agents in Alaska cannot possibly prevent this slaughter of game. An awakened public is necessary to prevent further serious inroads which otherwise will result in fewer big-game animals for years to come.

When the *Curaçao* steamed into the harbour of St Paul, Kodiak, at seven o'clock on a fine June morning, the scene surprised me by its beauty. The old Russian village of St Paul lies on the fringes of dark woods at the foot of soaring mountains which form the backbone of the island, their splintered peaks glittering with snow. The sea was a radiant blue. Wooded islands closed the mouth of the harbour, reminding European travellers of the entrance to Bergen, which lies in much the same latitude as Kodiak and has a rather similar climate. For Kodiak has also its Gulf Stream, the Kuro Siwo or Black Current of Japan. This is diverted southward by the Aleutian Chain, giving to south-eastern Alaska its mild, moist climate.

I found comfortable quarters at the Sunbeam Hotel, kept by a Dane, Mr Charles Madsen, a famous bear guide. It was frequented in the season by big-game hunters, who in pre-war days were almost the only visitors from 'outside'. The hotel had just been reconditioned and was clean and tidy. I was astonished to find hot and cold running water in my room. Above the basin this notice was affixed to the wall: "We are trying to run a nice clean hotel. Please try and help us keep it that way and don't lay on the bed with your shoes on. Some people do."

Kodiak's first known inhabitants were the Aleuts, a once numerous but now nearly extinct race of Asiatic origin, somewhat akin to the Eskimos. Recent excavations in old village sites on the island, however, have revealed traces of a people of unknown origin who apparently pre-dated even the Aleuts. The first white man to discover the island was the Russian trader, Stephan Glotov, he came in the wake of Vitus Bering and Alexei Chirikov, who put the Aleutian chain and much of the Alaskan coast on the map in 1741. It is remarkable that both Bering and Chirikov appear to have passed close to Kodiak on their separate voyages (for storm had parted them at the outset of their epic journey) without making any landfall nearer to Kodiak than the Shumagin Islands, which Bering named after one of his sailors who died of scurvy and was buried there.

On September 8, 1763, Glotov landed at



*Photographs by the author*

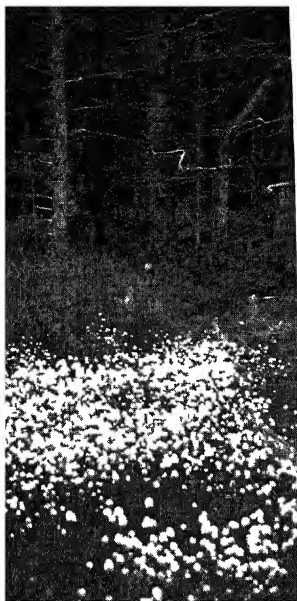
*To no spot in America has the war brought greater change than to the quiet harbour of Kodiak, now a great naval base*

Alitak Bay on the south coast of Kodiak, but it was not until 1784 that the Russians really took possession of the island. On August 3 of that year the famous Russian trader, Shelikof, whose name is commemorated by the tempestuous Shelikof Strait which separates Kodiak from the Alaskan peninsula, landed at a spot about half-way down the east side of Kodiak which the Russians named Three Saints Bay after their ship. He brought with him his wife and nearly two hundred semi-civilized hunters and traders. "With them" (says a recent writer) "came gunpowder, greed and the blessing of the Tsar of all the Russias." This, however, is scarcely fair to the Tsars, who had little knowledge of what those who traded in their name were doing on the other side of Siberia. When rumours of their atrocities at last reached the Empress Catherine II she at once ordered the explorer Billings, who was at that time at Okhotsk, to make inquiries and report upon the behaviour of the traders. She also sent missionaries to the islands, where the Russian Orthodox Church is still the sanctuary of the natives.

The names of certain of these brave men, some of whom became martyrs for their faith, are bright lights in a dark firmament, for it cannot be denied that the Russian traders were ruthless in the extreme.

In 1791 the Russian Governor Baranof, then in charge of the Russian-American Fur Company, saw the advisability of moving the headquarters of the company from Three Saints Bay to St Paul, about fifty miles north. This move was not only because St Paul was a better harbour but also because of the forest which still clothes this north-eastern end of the island. It provided the Russians with building material for their houses, at least one of which (now the hospitable home of the manager of the Alaskan Commercial Company on Kodiak) is still standing and claims to be the oldest Russian building in Alaska.

The forest of Kodiak extends to between thirty and forty thousand acres. It is the last western outpost of the great forests which cover the coastal regions of Alaska. These reappear again in Kamchatka, but the inter-



(Left) After Katmai's eruption, Kodiak bogs were white with ashes. Now they are white with bog-cotton. (Middle) A small lake near Kodiak village sheeted with yellow water-lilies. (Right) The spiked leaves of the tall *Fatsia* make penetration of Kodiak's forest difficult.

vening Aleutian and Komandorski Islands are quite destitute of timber

\* \* \*

In June 1941 Japanese Mitsubishi bombers dropped 2000-lb bombs on Dutch Harbour. It now appears that these bombers were based on a powerful Japanese task force aimed at the North American mainland, and that Alaska was saved "as by a miracle" by a handful of fighter pilots from a secret base on one of the islands west of Unalaska. The Allied occupation of the Andreanof Islands in the Aleutian chain last July, and the recent reoccupation of Attu, make it increasingly unlikely that Japanese planes will penetrate to Kodiak, but should they do so, perhaps their bombs will cause less dismay to the inhabitants of St Paul than they might do elsewhere in Alaska, for Kodiak lies close to the centre of the earth's greatest volcanic activity and the still warm volcanoes of the Alaskan peninsula.

During the great eruption of Mt Katmai in 1912 Kodiak, one hundred miles distant, was in complete darkness for more than two days, and the ground in the north-west corner of the island was covered with volcanic ash to an average depth of one foot, and very much more where the ashes drifted. Trees and ground vegetation appeared to be ruined, and even the bears became bald through the

action of the volcanic ash on their fur. But to the surprise of scientists, within a few years vegetation had become even more luxuriant than before, and the bears had recovered their original glossy coats.

Kodiak is now one of the most fertile farming areas in Alaska. Galloway cattle, imported from Scottish stock, flourish in its meadows, this breed having been selected on account of its hardiness and because Scotland has a somewhat similar climate.

Like the bears, flowers grow to an unusual size on Kodiak. The wild roses which I gathered in June were the largest I had ever seen. In a few days I had collected several hundreds of flower specimens, which were particularly rich on the slopes of Pillar Mountain, a steep hill rising behind the village, surmounted by a cairn from which a magnificent view could be obtained over the island-dotted harbour. Down in the forest under the spruce grew the fragrant little single-flowered wintergreen (*Pyrola uniflora*) with a perfume not unlike the freesia. Close beside it a large pond was a sheet of yellow water-lilies, the glossy leaves growing so thickly that the water was hardly visible. Blue lupin and yellow arnica made the meadows brilliant, but penetration into the deeper parts of the forest was almost impossible owing to the large sharp-spiked





*Wild lupin embellishes the outskirts of Kodiak's timber belt, which covers over 30,000 acres and is the most westerly outpost of Alaska's forest zone*

fatsia with its huge prickly leaves

Several roads led out from St Paul for a mile or two to north and south. On account of bears botanical exploration had to be restricted to this area. The oldest of the roads, leading to Mill Bay at the north end, was constructed by the Russians more than a century ago, for at this spot grain and meal was landed from their settlement at Ross in California. The longest road was the Abbert Highway in the opposite direction from Mill Bay. It was carried for about seven miles southward to Buskin River, past the site of the new naval base. Who Mr Abbert was I am not very certain, probably an official of the Alaska Road Commission which was working on Kodiak in 1936. Though sadly hampered for lack of funds, it owned the solitary motor car on the island, an open truck which plied between the Commissioners' tent at the riverside and St Paul, or elsewhere as circumstances required. A notice-board bearing the imposing title "ABBERT HIGHWAY" stood at the end of the street where the road branched off along the cliffs. On my first walk along this wild headland to the alder-groves and thickets of the Buskin I was a little apprehensive of a chance encounter with large bears, for I had been told that on occasion they frequented this river. A chance meeting with a roadman

who was clearing the ditches on either side of the track under a large mosquito veil did little to reassure me. "Bears!" he exclaimed in answer to my inquiry. "Don't you worry. The bear'll see you first, and then *you won't see no bear!*" It was more cheering to discover on the side of the stream, a few miles ahead, the big white tent of the two officers in charge of road-making.

Though the door bore a large placard, "Please don't ask for credit!" I had scarcely passed it when I was hailed by one of the road-makers and hospitably invited to partake of lunch. This included the biggest T-bone steak I had ever seen. Everything in Kodiak, its hospitality included, seemed outsize like its bears.

By the time I had finished my steak, and sampled an excellent home-made rhubarb pie, rain had begun to fall, and I enjoyed the privilege of a run back to the Sunbeam in the island's only car.

As the Abbert Highway approaches the village it skirts a cliff above the so-called Woman's Bay (a name surely inappropriate to the present turn of affairs). In 1936 one of the first planes to reach the island mouldered with outspread wings in its waters like the skeleton of some prehistoric bird, abandoned by its daring pilot. Little could he have dreamed six years ago that it was to be the vanguard of an air fleet destined to save Alaska.

To no spot in North America has the war brought more change than to Kodiak's quiet harbour. But still, above the busy scene in a grove of trees, with its belfry on the ground beside it, the old Russian church stands as a last link with the past. Its bells were cast of tin presented by Vancouver himself when he explored the Gulf of Alaska at the close of the 18th century. The church was founded in 1796 by a band of ten Russian missionaries, of whom the most famous was Father Herman, whose relics (a cap, a heavy iron cross and a flail) are still carefully preserved in the interior of the quaint old building, together with a beautiful Russian Bible embossed in platinum and gold. Father Herman died in 1837 and was buried on Spruce Island at the entrance to Kodiak harbour. Among the faithful of his church in Alaska his name is still as green as the trees above his grave, and the island where he lived and worked is now Alaska's stoutest bulwark of defence for the New Road back to the Old World—a road which today carries munitions of war, but which in the years to come may well prove one of the strongest links in the chain of international friendship.

# The Structure of the Past

## I. Ancient Egypt: Expansion and Decline

by SIDNEY SMITH

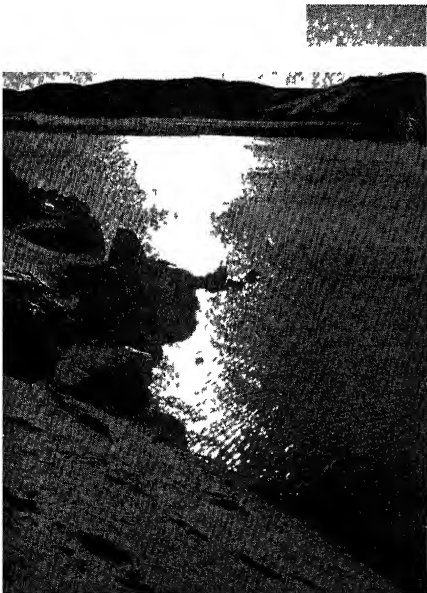
*Before the outbreak of the present war, it was commonly said that another world-wide conflict would be "the end of civilization." The organization and morale of modern industrial society has so far stood up to the test far more effectively than even the optimists had hoped, but great civilizations have indeed collapsed and even vanished altogether in the past, and while the conflict is still raging and forcing great changes in the structure of society and the alignment of power all over the world, it is interesting to examine the causes, in particular those of an economic and military character, which led to the rise and fall of the outstanding cultures of the past which have so far been discovered. Professor Sidney Smith opens this series with an article on the ancient civilization of the Nile Valley, other articles will follow on the Indus Valley, Mesopotamia, Greece and Rome.*

EGYPT consists of the banks of a magnificent waterway, broadening at the northern end into a triangle, the points of entrance and exit are limited. In the south the border, at the first cataract, is short, for traffic cannot stray far from the river. To the east, more than one of the wadis were doubtless used as roads to and from the Red Sea in ancient, especially pre-dynastic, times, Hammamat must always have been the most important, and the traffic was never likely to turn into an invasion. The north-western corner of the delta always allowed a limited infiltration, continued year by year, such infiltration could swell to a considerable volume, but attack in that quarter could easily be repulsed. The only boundary permitting entry by land over

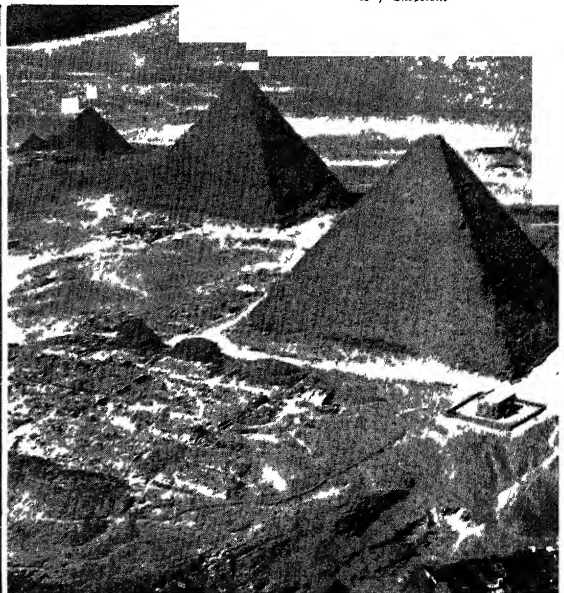
a considerable part of its length was that running from Lake Timsah to Lake Menzaleh. The country was easily defensible, the fact played a supremely important part in her history.

Egypt, a long narrow strip, might be expected to fall into three or four sectors, according to local interest. Main divisions are easily discerned. The south stretches from Elephantine to El Kab. Thence to Atfih and the Fayum may be called Upper Egypt, the kingdom of the white crown. From Hawara to Cairo, the region of quarries and pyramids, lay a population whose adherence could, in early times, establish the rule of a dynasty or end it. The delta was Lower Egypt, the kingdom of the red crown, a physi-

Tom Muir



H. J. Shepherson



cal unity utterly different from the other divisions

Such unity as Egypt has depends upon the prosperity bestowed upon her by the beneficent waters of the Nile. These contain no salts or deleterious matter. When man came down from the once wooded plateau in the west into the valley, he did not need to provide protection against river floods, as he had to do in the valleys of the Tigris and Euphrates, he simply made use of the results. Barley, wheat and flax grew in abundance, vegetable gardens and vineyards were profitable, pasture was ample to maintain ever-increasing flocks and wild game, fish and poultry abounded. In every district even the poor could live with little effort, and live, compared with men in other lands, relatively well.

There were considerable social differences in the various sectors in the earliest times, and these persisted. In the south the true Egyptian population was sparse and for the greater part transitory, bent on return to the north. Upper Egypt falls naturally into a series of districts within which inter-marriage and man's constant tendency to exclude strangers produced separate communities, such districts, known to the Greeks as *nomes*, were self-contained administrative units from the time when the earliest extant records were written, so that the basis of government was a kind of manorial system. In the quarry region, the miners and craftsmen necessarily chose to settle on the river-bank as near the rock-faces as possible, though the actual area inhabited shifted from century to century, the

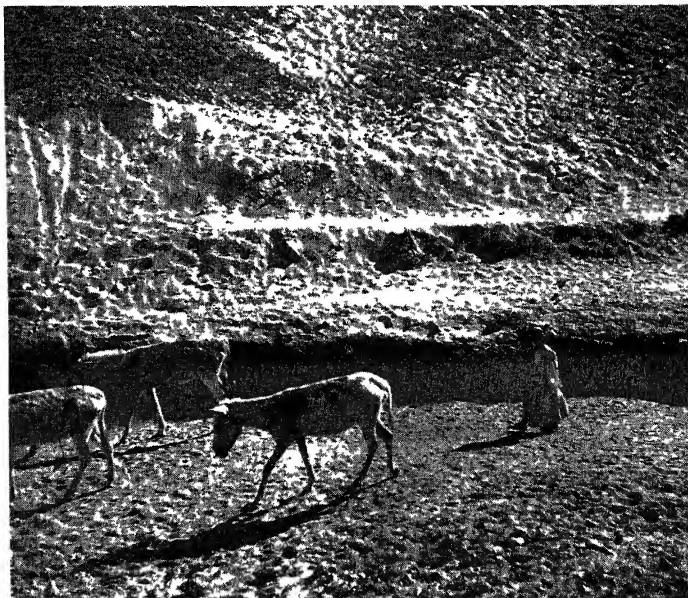
great cities preserved throughout their peculiar character as industrial centres, as against the settlements in Upper Egypt which only rose to be cities owing to political developments.

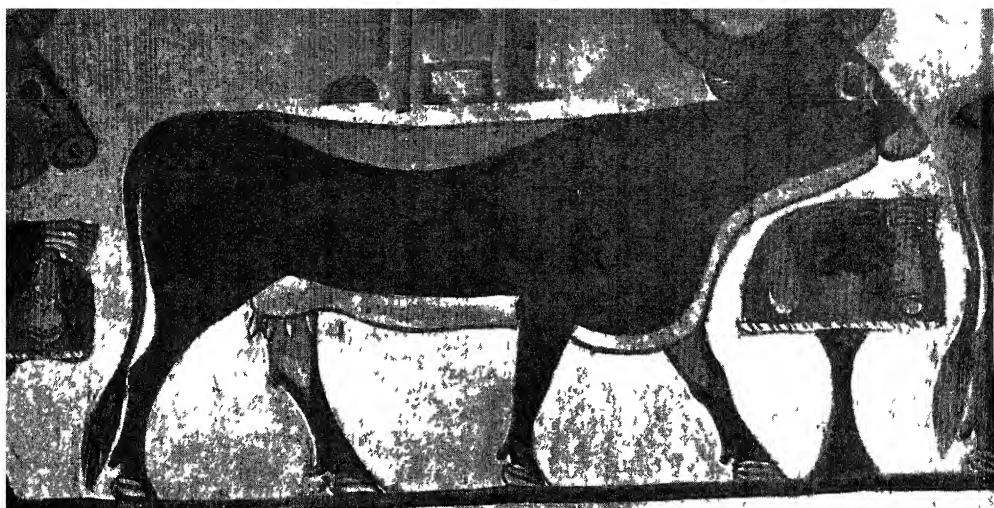
In the delta, on the other hand, the *fenmen* always huddled together in cities which were not the result of industry or politics, but of the growth of markets. It mattered very little whether the markets had become, in pre-dynastic times, centres of small kingdoms, or whether, after the union of Egypt, they became the capitals of *nomes*. The characteristic of mud-flats, as can be observed in the earliest remains of southern Iraq and in Sind, is settlement in cities. The divisions that result from such settlement are different in their essential character from the divisions introduced in the quarry region and from the landed estate units of Upper Egypt, but they have some superficial characteristics that are the same. One of the superficial resemblances is, that the cities also are self-contained units, in which all the organization required for a state can be reproduced in miniature, as it were.

In Upper Egypt, each *nome* had its own treasury, its own secretary and so forth, the lord of the *nome* had precise information as to the produce of each farm. Similarly, the delta princes, using the town authorities, could at any time give a fairly accurate estimate of the import and export, the current prices and profits. Thus there existed in Egypt a machinery that achieved, without much expenditure, all the results of a careful census. Other states, for example Babylon in the time of Hammurabi or Assyria from the ninth century onwards, aimed, with in-

*Toni Muir*

(Opposite left) Nile Valley scene, (right) "From Hawara to Cairo, the region of pyramids" looking down on the three great pyramids of Egypt (Right) "Such unity as Egypt has depends upon the prosperity bestowed upon her by the beneficent waters of the Nile." An irrigation ditch, the basis of Egyptian agricultural wealth and the ancient method of transport still in use







British Museum

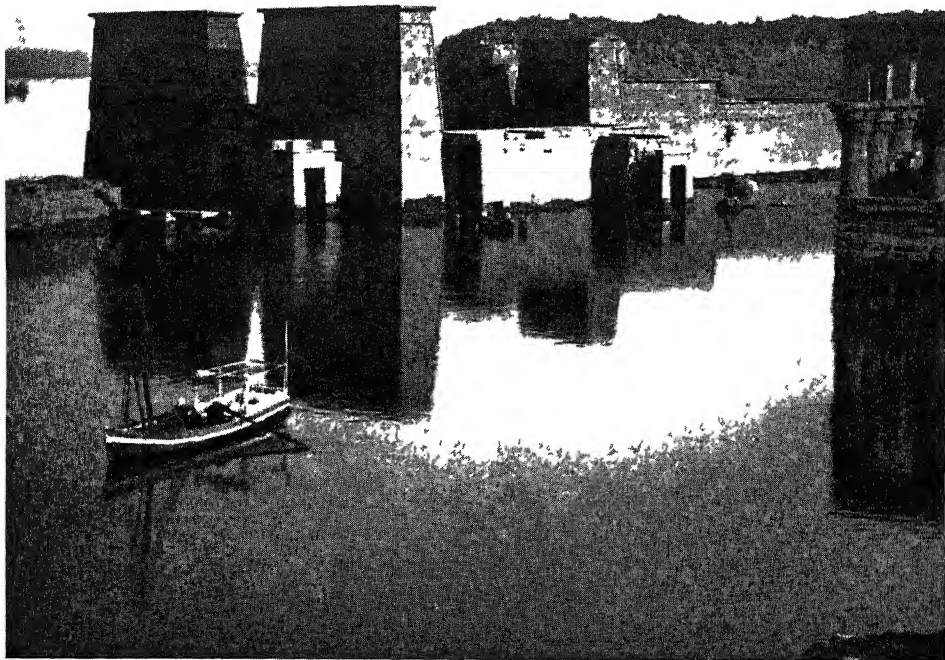
(Opposite) "Pasture was ample to maintain ever-increasing flocks" *The agricultural wealth of Egypt a painting of cattle in the tomb of Queen Nefertari* (Above) "Wild game, fish and poultry abounded", hunting in the reed-swamps about 1200 B C

finite pains, at compiling such information. It is characteristic of Egypt that the result was obtained without difficulty and without precise intention.

Strong administration can make use of such machinery to extract the utmost effort from a country. Weak administration will, of course, promote the centrifugal tendencies in such local district governments. Egyptian history is chequered during the period of native rule by the alternation between the two. The modern historian groups, in a chronological system only approximately, not accurately, defined, the periods of strong administration under the headings Old Kingdom (2800-2250 B C), Middle Kingdom (2150-1775 B C), New Kingdom (1580-1100 B C), those of weak central authority as First Intermediate (2250-

2150), Second Intermediate (including the Hyksos period) (1775-1580) and Late (1100-530 B C), the last often dubbed the Decline. The question of causality arises in a form that can never be solved with any finality. No glib generalization can veil our ignorance as to whether strong administration at the centre so weakened local authorities that total collapse finally resulted, or whether weakening at the centre was the immediate cause, or rather the result, of stronger local administrations. What is certain is that the rulers during the great periods of Egypt found it necessary to control lands beyond Egypt's borders, and that the constant tendency to relax control beyond the borders invariably led to Egypt itself breaking up, and very often to invasion.





*H J Shepherson*

*Egyptian civilization in the South, where the population was sparse*

A good point, then, for basing any observation of the causes of Egypt's rise and decay will be the reason for the tendency of Egypt to split up when no aggressive policy was followed. That reason must be sought in the interests of Pharaoh's subjects. The governors of the extreme south and the officials and soldiers with them were only occasionally able to boast that the trade with the Sudan was of greater interest to their king than the goods brought from Punt, presumably Somaliland, or Sinai, for the most part they could hardly procure sufficient military assistance to secure order and the continuance of trade. Only exceptional circumstances, that is a Pharaoh willing to maintain an army in the field, would keep this province closely bound to the north. In Upper Egypt the people were at all times unwilling to undertake wars, they were sometimes even unwilling to keep out or drive out foreign invaders. They felt themselves remote from danger, and the

natural inertia induced by the adequate supplies of necessities provided by the rich soil led to a marked reluctance to take up arms.

A striking example of this is to be found in the tolerance extended by the people of Upper Egypt to the rule of the Hyksos kings over the delta area and even south of it, during the later part of the 18th and 17th centuries B.C. No serious effort was made to drive these invaders, who came through Palestine, out of Egypt for over a century, not because that task was impossible or even particularly difficult. When Kames, king of Thebes, made up his mind to deliver Egypt, his grandees said, "We are at ease holding our part of Egypt," and pointed out the advantage of enjoying what they held, and leaving the foreigner alone in his possessions. This illustrates an attitude that must have been common both earlier and later than the recorded instance. Thus in the troubled time of the First Intermediate period, a nomarch



of the hare-nome, the region round the quarries at Hatnub, was able to represent his refusal to recognize the central authority as beneficence to his own subjects, "I rescued my city in the day of violence from the terrors of the Royal House" Willing to enjoy the fruits of foreign conquest when they were obtained, these nomarchs of Upper Egypt, and of the quarry region too, were not disposed at any time to devote their wealth or energies to fighting even in other areas in Egypt, much less in Asia

These sentiments did not prevail in the delta There the geographical conditions imposed lively intercourse with foreign lands, and the people in the towns were by no means blood-brethren of the Upper Egyptians Some part of Egyptian prehistory is concerned with the infiltration from the western desert of Libyan tribes Throughout the later centuries Libya was invaded by fresh peoples, and the result was further admixture of foreigners in the delta population From these men strong Pharaohs seem to have recruited a police force, and, even more important, a standing naval force On that force Egypt's relations with the countries with which her trade was most important depended, not exclusively, but to a considerable extent

These countries were the islands and coasts of the eastern Mediterranean The trade with Nubia supplied the royal treasury with gold, the trade with Punt, probably Somaliland and perhaps the Hadhramaut, supplied

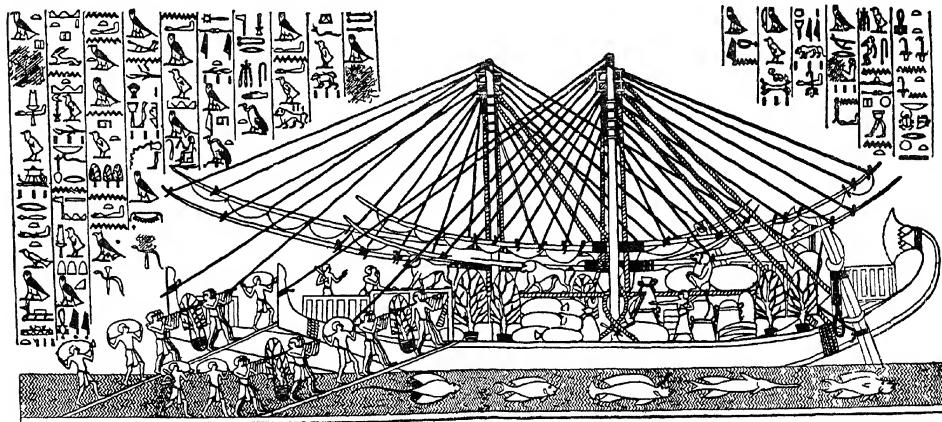
much appreciated incenses and essences But the trade with the Mediterranean lands brought raw and manufactured materials with which Egypt could never finally dispense, all her history consists of an oscillation in policy, veering from the complete acceptance of this necessity and the determination to keep the trade securely under Egyptian control, to a desire not to be involved in foreign commitments together with a passive acceptance of control by others

One element in the trade, which can be traced from about 3000 B C onwards, till about 1400 B C, was the connection with Crete, and later with Mycenae The archaeological evidence is sufficient to prove this intercourse, which might, by itself, be explained as due to Cretan fleets were it not that other sea trade must have been carried at least to some extent in Egyptian ships The fact seems to be that though Egypt can never have been a supreme sea power, her ships did ply both westwards and northwards the security Egyptian supplied was essential to other shipping, so that Egyptian influence with maritime powers was always a potent factor in in-



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"The trade with Punt, probably Somaliland and perhaps the Hadhramaut, supplied much appreciated incenses and essences" (below) loading a vessel with merchandize for Queen Hatshepsut's expedition to Punt (Above) "One element in the trade was the connection with Mycenae" Mycenaean pottery of about 1380 B C found in Egypt



From 'History of Egypt, by J H Breasted (Scribners)



Toni Muar

*The famous colossal statue of Amenophis III, who ruled over Egypt at the height of its power, 1411-1375 B C*

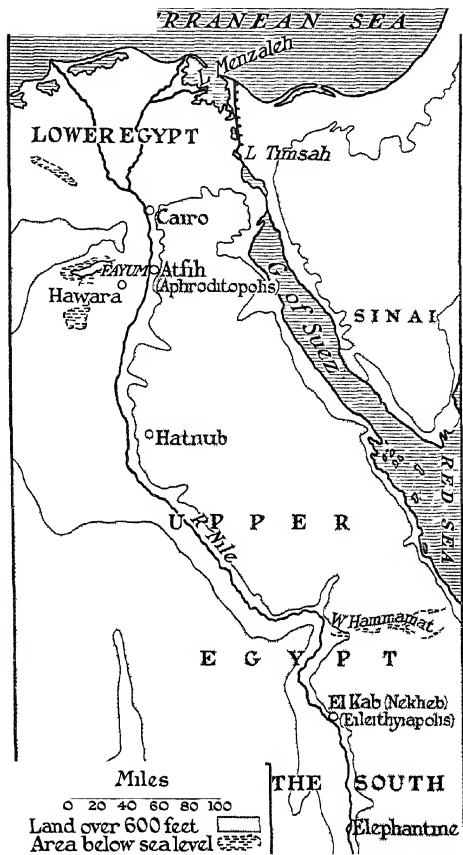
ternational politics that has not yet been properly appreciated. A striking testimony to such influence may be found in the archives of the Hittite Empire, the earliest documents in which belong to the end of the reign of Amenhetep III, or the time of the heretic Amen-

hetep IV, Akhnaten, after 1400, and cover the period down to about 1250. During that time the Pharaohs corresponded not only with their 'brothers', the suzerains of the Hittite Empire, when they were not at war with them, but also with the kings of small

kingdoms situated along the southern coast of Asia Minor Egyptian influence along this coast can be assumed for an even earlier date, not later than the 16th and possibly as early as the 18th century B C, for the hieroglyphic writing adopted to express an Indo-European language spoken along that coast employs one or two symbols that can only be derived from Egyptian hieroglyphs. Antiquities of local workmanship copying Egyptian forms have been found even in the north of Asia Minor, near Ankara. The little states on the coast of Pamphylia and Lycia lived on legitimate trade, and piracy as well, diplomatic relations with Egypt as attested by documents of the early 13th century show how far-reaching Egypt's international position became under strong central control.

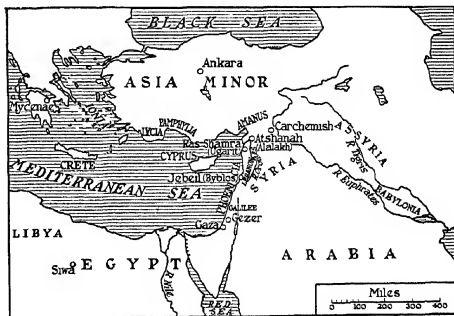
In Cyprus there is no certain evidence of direct interchange of goods with Egypt till the end of the 15th century B C, the island seems to have remained outside the main flow of international trade, for some reason we do not clearly understand, till this comparatively late date. But the evidence for extensive trade with the towns of the Phoenician coast up to and including the port which lay opposite the northern tip of Cyprus at Ras Shamra, is abundant, beginning at a very early period and only ceasing intermittently. Ancient Syria contained commodities of great value in the ancient world. The most important was wood. Cedar, obtained at first from the Amanus and later from the Lebanon, was particularly prized, not only by the Egyptians, the hard woods of Asia Minor, shipped at the northern ports, in the form of logs, were much used. The sand of the Orontes valley gave rise, owing to its composition, to a glass industry, and it was probably from that area that glass was first imported into Egypt, though some still doubt the fact, later the sand may still have been the usual material employed. The red and purple dyes for which Phoenicia was famous among the Greeks and Romans were already in use before the 15th century, the name Canaanite may derive from a name of the dye, as the Greek *Phoinikes* almost certainly derives from the Greek name of the dye, *phoinix*. Of such goods Egypt, though that land produced the necessities of life, had urgent need, no ruler of Egypt could afford to neglect the Mediterranean trade and any actual neglect was always attended by undue interest in Egypt by others.

It is sometimes said that Egypt provided the typical example of a civilization indigenous in the country, in its uninterrupted development and final decay. That is an erroneous conception that has nothing to do with the historical facts, as Flinders Petrie saw. If we



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seek to define the cause of Egypt's greatness in the three periods of strong central authority, the Old Kingdom, the Middle Kingdom and the New Kingdom, one fact stands out, Egypt during those periods controlled part or all of the Phoenician coast and at the same time the main road from Egypt through the



Stanford, London



*Tom Muir*



*From Ancient Egyptian Paintings by Mrs Davis (Chicago University Press)*

*"Even during the periods of strong central control, the struggle of those who would enjoy what they had and allow the effort abroad to cease, sometimes proved too strong for the personal rulers" (top) An Egyptian dinner party in the time of the 18th Dynasty A painting from the tomb of a civilian official, (bottom) Nubians bringing presents to Pharaoh, about 1400 B.C., this subject-people conquered Egypt about 730 B.C*

desert to Gaza, at least to the Lebanon, sometimes even further north. Similarly the cause of decline in the First and Second Intermediate periods and the Late or Decadent period cannot be dissociated from the failure of the rulers of Egypt during those periods to maintain control of the land route and to support their maritime allies. Every excavation conducted in recent years has emphasized this truth, none more clearly perhaps than the French excavations at Byblos, the modern Jebel, the material remains of direct rule or the suzerainty of kings of the Old, Middle and New Kingdoms have all been found there. Further north, at Ras Shamra, the ancient Ugarit, and Atshanah, the ancient Alalakh, similar documents testify to the suzerainty of both Middle and New Kingdoms.

Even during the periods of strong central control, the struggle of those who would enjoy what they had and allow the effort abroad to cease, sometimes proved too strong for the personal rulers to resist. There

is a good example of this in the XVIIIth Dynasty, and another in the early decline of the XXth. Ahmose, the Pharaoh who had finally driven out the Hyksos, and his immediate successors, based their rule on the maintenance of a strong army, the local administrations, strictly supervised by the sovereign himself, had to produce whatever was required for that purpose. Throughout the 16th century the Egyptian Empire in Asia expanded till Thutmose I about 1525 B.C. led his army to the Euphrates. When he died, troubles connected with the succession brought into power at court the set of officials who surrounded Queen Hatshepsut, nobility of Upper Egypt. They immediately called a halt to the military effort in Syria and concentrated attention on a trading expedition to Punt. They represented the interests of the old aristocracy as against the new military upstarts favoured by the kings, they preferred what they knew, the Red Sea trade, to the maintenance of control over Phoenicia. Thutmose III was only able to reverse this policy by a bitter opposition which led him to deface the queen's monuments when he assumed independent rights. The Theban priests, who regained control over the reigning monarch in the time of



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*"The Saxe princes won their victories with Greek and Carian mercenaries. Later, they were soundly beaten at Carchemish" the remains of a Greek mercenary's shield from the battle against Nebuchadnezzar, found in Sir Leonard Woolley's excavations at Carchemish*

Tutankhamen, again allowed imperial interests to slide, and this time a new dynasty had to arise, basing its power on Tanis in the delta, before the Empire was saved. The same priesthood greatly increased in power after the reign of Rameses III, the Egyptian Empire ceased to be, and the delta was neglected.

The facts show fairly clearly that the autochthonous development of civilization was continuously and strongly influenced by foreign contacts, and that the climactic points were invariably associated with the expansion of Egyptian rule in Western Asia, and consequent increased influence in the eastern Mediterranean. After the heroic resistance to the attempted invasion of the Sea Peoples shortly after 1200 B.C., there are no more climactic points. Upper Egypt relapsed into the effortless existence reflected in the facile productions of the XXIst and XXIIIrd Dynasties, 1085-730 B.C. The priests performed with meticulous pains the ancient rituals. Scribes copied from ancient texts, sometimes well, sometimes ill, they do not seem to have been fertile in original compositions. The military nobility lost their taste for war but retained their titles. The poor,



ground by heavy taxation and tied by debt, were probably worse off, but they avoided fighting and did not starve. The revenues which had maintained an army kept a host of priests. There was one isolated effort to maintain a hold on Gezer, the Palestinian end of the land route, but it seems quite

isolated in a period lasting over two centuries. But Egypt had been very strong, and was easily defensible. The land remained independent.

During this long period of inert independence the divergence of interest and purpose between Upper Egypt and the delta increased. The most recent invaders of Libya, who came almost certainly from Asia Minor, had led a serious attempt at invasion of Egypt in the 13th century, foiled at that time, the Mashwash gained a footing in the delta by slow infiltration. They undertook service as mercenaries and so earned grants of land. Their settlements were controlled by their own leaders, who became important officials. Though they kept their peculiar personal names, and some features of their national costume, they adopted Egyptian religion and customs, and did not parade their alien origin. Slowly all power in the delta fell into their hands, till finally, about 950, Sheshanq I founded the XXIInd Dynasty, which rarely, and only for short intervals, controlled Upper Egypt. Though the founder was the only king of his line known to have conducted any military campaigns in Palestine, his success in establishing his rule as far north as Galilee re-established the prestige of Egypt in Phoenicia and consequently in the eastern Mediterranean. The interests of his dynasty remained in the control of sea trade in the delta cities. This policy can be followed in the annals of Assyrian kings from the second half of the 9th century to the beginning of the 7th, for there are no royal records from Egypt for the duration of the Libyan dynasty. It appears that the Phoenicians throughout this time of developing Assyrian power, first in Syria and then in Palestine, were in an awkward dilemma. Threatened from the land side by the Assyrians, they had to recognize their suzerainty by paying tribute, obliged to use Egyptian ports by the traffic they were sedulously cultivating with the western Mediterranean, they were not in a position to affront, or even to refuse alliance with, the ruler of the delta.

The decline of the Libyan dynasty and its final cessation of rule over the delta princes about 730 must in some way be connected with a change in Libya itself. We know that about this time the rulers of Napata in Nubia seized the oasis of Siwa, and introduced there the cult of a form of Amen worshipped in their own city. This move can only mean that Libyan trade with the Sudan was no longer in the hands of the coast cities, but that the other end of the traffic had obtained control. The end of this was to be foreseen, the Nubians gained control of Upper Egypt with-

*Senusset III, about 1876-1838 B.C., the strong ruler of an Empire which reached from Syria to Nubia*





out difficulty and finally established themselves firmly as masters of the delta princes. They followed (naturally, since they were interested in the same trade) the Libyan policy, a continuous attempt to thwart the Assyrians by the encouragement of revolt in Syria, the Phoenician ports, anywhere. And slowly—but only slowly—this policy led to disaster. First the enemies of Assyria in Palestine and Phoenicia found that Egypt could not or would not save her allies. Then the Assyrians found that victories in Asia were not enough. They decided that the root of the trouble was Nubian rule and drove the XXVth Dynasty out of Egypt. They did not stay. They had never wanted that. But their garrisons had to be thrown out by some show of force, and the state to which Egypt was now reduced can be judged from the fact that the Saite princes who led the revolt won their victories with Greek and Carian mercenaries. Later, they fought their wars against the Babylonians, when Nebuchadnezzar had wrested an Empire from the Assyrians, with the same troops, and were soundly beaten, both at Carchemish in 605 and in the war for the Arabian trade at the head of the Red Sea. Under this dynasty Egyptian art and literature flourished, a novel adaptation of old forms to new times, but no effort was made to produce a national movement, and there was no pretence that the royal army was much else than an instrument of oppression. Egypt had ceased to be a nation, it had become a magnificent farm.

Such, then, was the decline. The people that had once controlled the trade that came to their land had now been controlled from Libya, from Nubia and from Asia. By the end of the 6th century they had become part of the Persian Empire, which ultimately reached from the Black Sea coasts to the Sudan and from Ionia to Sind. Now and then the presence of Greek mercenaries encouraged a flicker of rebellion, sometimes the Greeks for their own purposes fought the Persians in Egypt. There was no reaction from the mass of Egyptians. Finally the

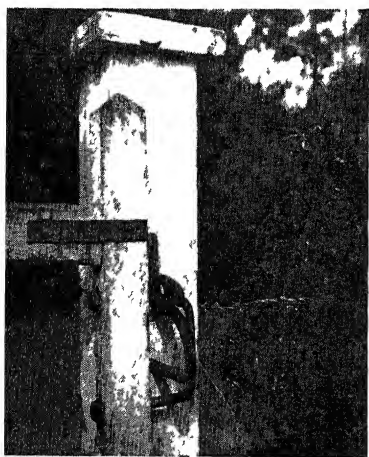
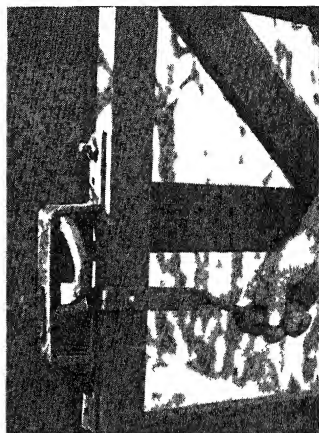
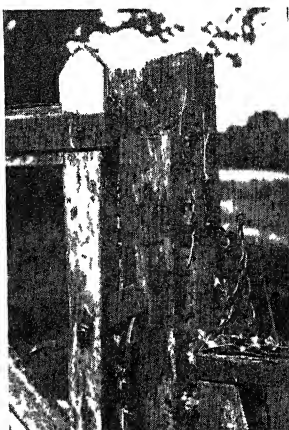
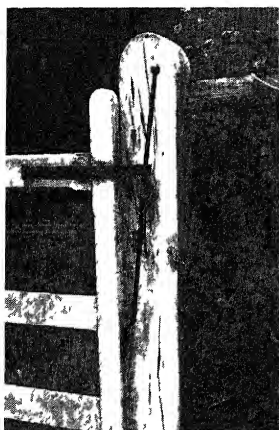


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*"Egypt during those periods controlled part or all of the Phoenician coast and at the same time the main road from Egypt through the desert to Gaza" men from Palestine and the Phoenician coast bringing tribute to Egypt, as represented in a wall-painting before 1400 B.C.*

Macedonians came, and so the last turn of the screw was applied. An able follower of Alexander saw in this easily defensible land, with all the requisite administrative machinery of a sound business, a firm basis for the establishment of a dynasty. So all Egypt became what, in times of weak central control, the individual nomes had been, an excellent private estate. The Ptolemies resided in their Greek city, Alexandria, surrounded by works of Greek artists with a magnificent library of Greek books, and fought their wars in the Greek style. The Egyptians slaved on the farms, rejoiced in the permission to use their own language, worship their own gods in temples that proclaimed the foreign rulers to be the true successors of the old Pharaohs—and enjoyed as best they could a peaceful and well-fed, if dependent and laborious, existence.

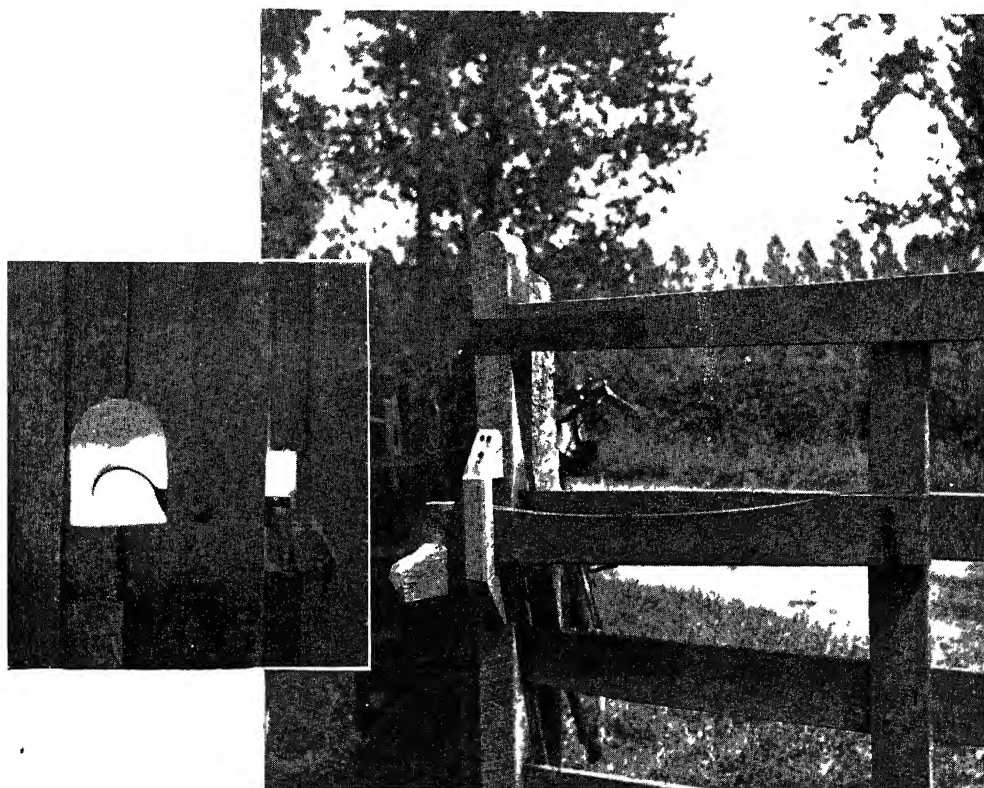
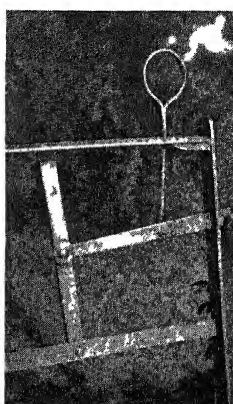
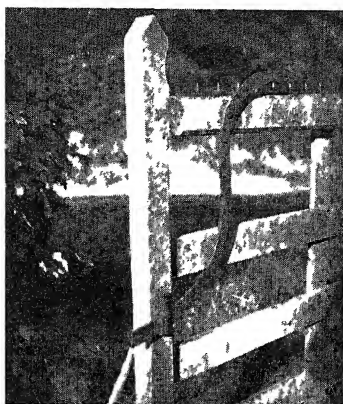
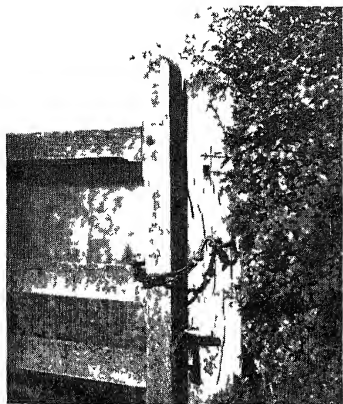
In the social and economic causes of the rise and prolonged decline of Egyptian civilization geographical conditions and human biology played equal parts. History in this land is the record of a struggle between energy and inertia. Inertia won. But energy created for short spells a civilization which achieved enduring glory.



# ENGLISH GATE LATCHES

PHOTOGRAPHS BY E M MARTIN





# George Crabbe and Suffolk

by CHARLES TENNYSON, C M G

GEORGE CRABBE is the most unreasonably neglected of British poets, just as, until lately, his native Suffolk was the most unreasonably neglected of English counties. Perhaps the reasons are the same in both cases. Both the poet and the county are level, honest, utilitarian. Suffolk can boast only one hill over 400 feet high and Crabbe wrote almost his entire works in the rhyming couplet and often in a singularly matter-of-fact and pedestrian style. Suffolk rivers move slowly and circuitously to the sea, as do Crabbe's tales towards their conclusion. Suffolk has no forests—Crabbe no mysteries. The Suffolk sea is grey and harsh as the poet's outlook—though, like it, visited now and then with moods of divine serenity. Both are honest, simple, rather forbidding to strangers, with nothing specious or showy about them.

It is most fitting, therefore, that Crabbe should be the poet of Suffolk, where he was born, spent his childhood and youth in all, forty-one years of his life.

Crabbe was born in 1754 at Aldeburgh, where his father held a small post in the Customs. He early showed signs of unusual ability and was sent to school, first at Bungay, then at Stowmarket. When he was fourteen years old it was decided that he should take up medicine as a profession and he was apprenticed, first to an apothecary in the little village of Wickham Brook, in the extreme west of the county, and afterwards to a more important practitioner at Woodbridge. While here he first met Sarah Elmy of Beccles, who was staying with her uncle, a large farmer of Ducking Hall, Parham, about eight miles away, on the site of what is now Parham New Hall. This was the beginning of a courtship prolonged by hard necessity over eleven years and ended by marriage in 1783.

During these years the poet went through much sorrow. His family fell on evil days and he had to give up for a time the idea of becoming a doctor and toil as a common porter on Slaughden Quay, a mile south of his native city, then a busy and thriving port, but now almost entirely devoted to yachting, yacht-building and fishing. At last he was enabled, by the help of Dudley Long, Squire of Saxmundham, to go up to London to seek his fortune. There, when on the brink of starva-

tion, he was befriended by Edmund Burke, who arranged for his first volume to be published and helped him to take Holy Orders. In 1782 he was for a short time Curate at Aldeburgh, then he left Suffolk till 1792, when he went for a short time to live at Ducking Hall, after which he was Curate of the adjoining parishes of Rendham and Sweffling, between Framlingham and Saxmundham, just south of that bleak little plateau which is bounded on the north by the valley of the Yox. He lived first in a fine Jacobean Hall at Great Glemham (now entirely destroyed)—more loved by the poet than any of his other homes. This is how his son described it: "A small well-wooded park occupied the whole mouth of the glen. In the lowest ground stood the commodious mansion the approach wound down through a plantation on the eminence in front. The opposite hills rose at the back of it, rich and varied with trees and shrubs scattered irregularly, under this southern hill ran a brook, and on the banks above it were spots of great natural beauty, crowned by white-thorn and oak. Here the purple scented violet perfumed the air, and in one place coloured the ground. On the left of the front, in the narrower portion of the glen, was the village, on the right, a confined view of richly wooded fields. In fact the whole parish and neighbourhood resemble a combination of groves, interspersed with fields cultivated like gardens, and intersected with those green dry lanes which tempt the walker in all weathers." It was a grief to the family when they had to leave Great Glemham for a smaller and humbler house, which is still standing, about half a mile east of Rendham. This proved to be his last home in Suffolk, for to his great regret he had to leave the county for good in 1805.

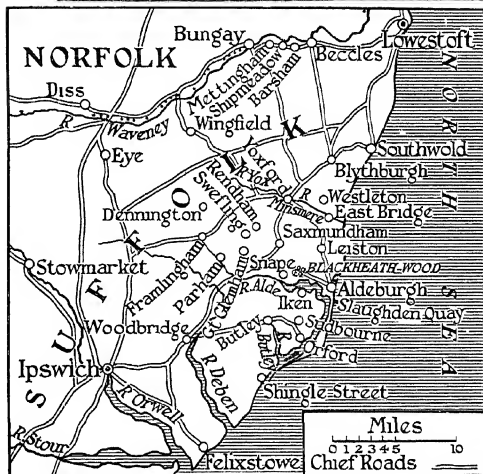
It will be seen that circumstances led Crabbe into every part of his native county, and its scenery and characteristics permeate the considerable volume of his works. But he recurs most often to the long succession of heaths, rivers and marshes which stretch along the coast from Woodbridge and the Deben, up to Beccles and the Waveney, and to the grey cold sea which continually batters and erodes the shore—for it is here that his early and most formative years were spent.



Jarrols

*The 'Town Steps' at Aldeburgh, looking towards the sea. In the distance on the right is one of the old look-out towers on the beach, from which the fishermen used to watch for shoaling fish or wrecks*

He suffered much in those early days at Aldeburgh and saw and heard of many cruel and tragic events on sea and river. It is not surprising, therefore, that the picture which he gives is often a grim one. For example, the holiday-maker with pleasant memories of Aldeburgh golf course, set on its high moorland overlooking the Alde, will hardly recognize the following impression — which





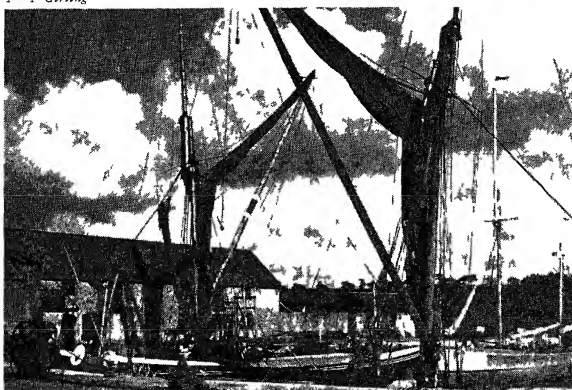
*British Council*

*F A Gurling*



*High tide on the river Alde, near Iken. At low tide the river is only a narrow ditch between mud-banks. The barge in the foreground has probably sailed up from London.*

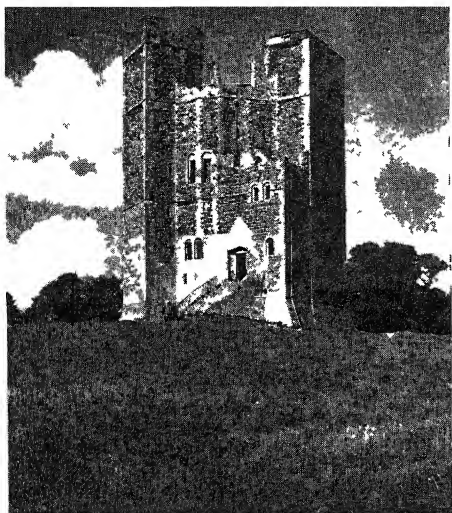
*F A Gurling*



*On the Deben, looking up towards Woodbridge, where Crabbe passed the last stage of his medical apprenticeship and where he first met his wife, Sarah Elmy.*

*The Quay at Woodbridge. Once like Aldeburgh, it was a busy inland port and centre of distribution for South East Suffolk. Barges and yachts still give the little port life and purpose.*





F. A. Girling

(Left) *The Keep at Orford, the little medieval town on the Alde, whither the boy Crabbe made many a pleasure trip from his native town six miles up the river* (Right) *The old church and campanile at Beccles, where Sarah Elmy lived. It was to Beccles that Crabbe used to ride from Blythburgh, on his twenty-three-mile 'lover's journey'*

yet was probably true enough in the poet's day

Lo! where the heath, with withering brake grown o'er,  
Lends the light turf that warms the neighbouring poor,

From thence a length of burning sand appears,  
Where the thin harvest waves its wither'd ears,  
Rank weeds, that every art and care defy,  
Reign o'er the land, and rob the blighted rye  
There thistles stretch their prickly arms afar,  
And to the ragged infant threaten war,  
There poppies, nodding, mock the hope of toil  
There the blue bugloss paints the sterile soil,  
Hardy and high, above the slender sheaf,  
The slimy mallow waves her silky leaf,  
O'er the young shoot the charlock throws a shade,  
And clasping tares cling round the sickly blade

When Crabbe chose he could paint a very different picture—though often enough even his pleasant pictures are painted for the purpose of tragic contrast. Take, for example, these lines in which he describes the condemned felon dreaming, on the night before his execution, of the walks which he used to take with his sweetheart about these same heaths in the days of his boyish innocence

They feel the calm delight, and thus proceed  
Through the green lane,—then linger in the mead—  
Stray o'er the heath in all its purple bloom,—  
And pluck the blossom where the wild bees hum,  
Then through the broomy bound with ease they pass,  
And press the sandy sheep-walk's slender grass,

Where dwarfish flowers among the gorse are spread,  
And the lamb browses by the linnet's bed,  
Then 'cross the bounding brook they make their way  
O'er its rough bridge—and there behold the bay!

The Alde, where Crabbe worked as a porter and swam and sailed as a boy, is continually in his mind, and there are few more interesting rivers in England. It is tidal for nearly twenty miles—from its mouth at Shingle Street to the fine old Malting at Snape Bridge. From the latter point it runs due east to Slaughden, where, within a few yards of the sea, it turns at right angles, due south, and flows for twelve miles parallel with the shore and only separated from the sea by a high bank of shingle varying in width from a few yards to half a mile. On its west side is a stretch of marshland, broken only by the ancient medieval town of Orford, with its Norman church and keep, by the inflowing of its tributary, the Butley River, and by an occasional spur of the low hills over which spread Butley, Sudbourne and Iken heaths. At high tide the river swells in its upper reaches to a great sheet of water a mile wide. At low tide it diminishes to a trickle between high mud-banks. It is a favourite haunt of wild-fowl of all kinds, and such rare birds as the bittern and osprey are seen there from time to time, while it still yields good sport both to net and line. But with all this life and movement it is a grim river, except in the



F. A. Garland

*A subject for Mr Gainsborough of Sudbury Part of Tangham Forest, on the great stretch of sandy heath that extends from the Deben to the marshes of the Upper Alde*

reach immediately below Snape, where on the south side Iken church stands dreaming on a green and well-timbered headland, which juts out into the stream, and on the north Blackheath Mansion nestles in its heron-haunted woods of fir, elm and beech

It is no wonder that all Crabbe's pictures of the Alde have a singular vitality. They are also scientifically precise, for the poet was a first-rate botanist and a keen observer of bird and animal life

With ceaseless motion comes and goes the tide,  
Flowing, it fills the channel vast and wide,  
Then back to sea, with strong majestic sweep  
It rolls, in ebb yet terrible and deep,  
Here Samphire-banks and Salt-wort bound the flood,

There stakes and sea-weeds withering on the mud,  
And higher up, a ridge of all things base,  
Which some strong tide has roll'd upon the place

and how brilliantly he can use the river's moods to enforce the atmosphere of his story, as in the dreadful tale of Peter Grimes, the brutal fisherman, suspected of murdering his apprentice

When tides were neap, and, in the sultry day,  
Through the tall bounding mud-banks made their way,  
Which on each side rose swelling, and below  
The dark warm flood ran silently and slow,

There anchoring, Peter chose from man to hide,  
There hang his head, and view the lazy tide  
In its hot slimy channel slowly glide,  
Where the small eels that left the deeper way  
For the warm shore, within the shallows play,  
Where gaping muscles, left upon the mud,  
Slope their slow passage to the fallen flood,—  
Here dull and hopeless he'd lie down and trace  
How sidelong crabs had scrawl'd their crooked

race,  
Or sadly listen to the tuneless cry  
Of fishing gull or clanging golden-eye,  
What time the sea-birds to the marsh would come,  
And the loud bittern, from the bull-rush home,  
Gave from the salt ditch side the bellowing boom  
He nursed the feelings these dull scenes produce,  
And loved to stop beside the opening sluice,  
Where the small stream, confined in narrow bound,  
Ran with a dull, unvaried, sadd'ning sound,  
Where all, presented to the eye or ear,  
Oppress'd the soul with misery, grief, and fear

In the same way he casts a gloom over one of my favourite places of pilgrimage, 'Little Japan', on the 'Mansion reach', where the high left bank, crowned with fir trees, looks south over one of the broadest stretches of the river and over Blackheath woods and house to the west, while far away to the east can be seen the outskirts of Aldeburgh and Slaughden Quay

To Henry, the despondent lover, standing on the fir-crowned hill in early autumn, the



F. A. Gilling

*Coast erosion at deserted Covehithe, between Southwold and Beccles The ruins of the huge church, a quarter of a mile from the shore, show that this was once an important and populous settlement*

scene, visited with delight in happier days,  
serves only to increase his despondency

But now dejected, languid, listless, low,  
He saw the wind upon the water blow,  
And the cold stream curl'd onwards as the gale  
From the pine-hill blew harshly down the dale

Far to the left he saw the huts of men,  
Half hid in mist that hung upon the fen,  
Before him swallows, gathering for the sea,  
Took their short flights, and twitter'd on the lea  
And near the bean-sheaf stood, the harvest done,  
And slowly blacken'd in the sickly sun

Even nearer than the river to the young  
poet was the grey North Sea, which rolled  
almost to the door of his father's cottage and  
has since rolled over it and over many another  
house and garden on that shifting coast  
Crabbe is never tired of describing that grey  
sea, so beloved of Edward FitzGerald He  
pictures it in every mood In calm and sun-  
shine

Be it the summer-noon a sandy space  
The ebbing tide has left upon its place,  
Then just the hot and stony beach above,  
Light twinkling streams in bright confusion move,  
Then the broad bosom of the ocean keeps  
An equal motion, swelling as it sleeps,  
Then slowly sinking, curling to the strand,  
Faint, lazy waves o'ercreep the rigid sand,

Or tap the tarry boat with gentle blow,  
And back return in silence, smooth and slow

In storm, as he so often saw it when the wives,  
daughters and sweethearts of the fishermen  
gathered in terrible anxiety on the beach,  
waiting for news of their men folk, caught out  
at sea by the squall in their flat-bottomed  
sailing-boats

All where the eye delights, yet dreads, to roam  
The breaking billows cast the flying foam  
Upon the billows rising—all the deep  
Is restless change, the waves so swell'd and steep,  
Breaking and sinking, and the sunken swells,  
Nor one, one moment, in its station dwells  
But nearer land you may the billows trace,  
As if contending in their watery chase,  
May watch the mightiest till the shoal they reach,  
Then break and hurry to their utmost stretch,  
Curl'd as they come, they strike with furious force,  
And then re-flowing, take their grating course,  
Raking the rounded flints, which ages past  
Roll'd by their rage, and shall to ages last

Even then he has an eye for the wild life  
which was such a delight to him

High o'er the restless deep, above the reach  
Of gunner's hope, vast flights of Wild-ducks  
stretch,  
Far as the eye can glance on either side,  
In a broad space and level line they glide,  
All in their wedge-like figures from the north,  
Day after day, flight after flight, go forth

How admirable, too, is the description of a fog, as it appears to a watcher on the flat Aldeburgh shore

The ocean too has Winter views serene,  
When all you see through densest fog is seen,  
When you can hear the fishers near at hand  
Distinctly speak, yet see not where they stand,  
Or sometimes them and not their boat discern,  
Or half conceal'd some figure at the stern,  
The view's all bounded, and from side to side  
Your utmost prospect but a few ells wide,  
Boys who, on shore, to sea the pebble cast,  
Will hear it strike against the viewless mast,  
While the stern boatman growls his fierce disdain,  
At whom he knows not, whom he threatens in vain

But it is not only in these large-scale pictures that Crabbe's Suffolk lives for us. There are innumerable thumbnail sketches—of the moated Jacobean Halls, buried up to their turrets in the tree-tops of their overgrown parks, of Abbey ruins almost merged in some solitary copse or pasture, of the ruffed and painted lords and ladies stretched on their tombs in the Parish Church, as at Framlingham, Dennington and Wingfield

Mangled and wounded in their war with time,  
of the little seaside cottage—

Yon tenement apart and small  
Where the wet pebbles shine upon the wall  
Where the low benches lean beside the door  
And the red paling bounds the space before,

of the poor oyster-dredger on the chill rough  
river, who

Cold and wet and driving with the tide  
Beats his weak arms against his tarry side,  
Then drains the remnant of diluted gin  
To aid the warmth that languishes within,

of the busy Quay where amid "Package, and  
parcel, hogshead, chest and case"

the loud seaman and the angry hind  
Mingling in business, bellow to the wind,

while the "half naked sea-boys" dabble on the  
shore exulting in the turmoil, and in the ship-  
yard hard by, where the planks "curve and  
crackle in the smoke" and the air all about is  
filled with "the warm pungence of o'erboiling  
tar"

One of his cleverest sketches describes a  
hopeful lover's ride from Aldeburgh to  
Beccles to see his sweetheart—no doubt a ride  
which Crabbe himself had taken many times  
for a similar purpose. No names are men-

tioned, but almost every mile of the ride is  
clearly identifiable. First, over "the barren  
heath" (the eastern edge of Leiston heath  
above the marsh), then through "lanes of  
burning sand", then across "a common  
pasture wild and wide" (Leiston Common)  
grazed by small blackfaced sheep "fleshless,  
lank and lean." Then across the western  
edge of Minsmere marsh through East Bridge  
where

Far on the right the distant sea is seen,  
And salt the springs that feed the marsh between  
Beneath an ancient bridge, the straiten'd flood  
Rolls thro' its sloping banks of slimy mud,

and so on through the sandy lanes to Westle-  
ton and Blythburgh, whence the main road  
would carry the rider to Beccles. So far the  
ride, in spite of the heat and dust and the  
barrenness of the prospect, is all delight to the  
young man, buoyed up by the prospect of see-  
ing his beloved Laura. But, alas! when he  
reaches the town he finds her gone to visit  
a friend. Tortured by disappointment and  
jealousy ("means she to a *female* friend?"), he  
sets out along the lovely valley of the Wave-  
ney, through Barsham, Shipmeadow and  
Mettingham, where

The road, now near, now distant, winding led  
By lovely meadows which the water fed,

by rural mansions

With hedge-row trees and hills high crowned with  
wood,  
And many a devious stream that reach'd the  
nobler flood

But now all is stale and unprofitable. He  
hates the long green lanes

There's nothing seen  
In this vile country but eternal green—  
Woods! Waters! Meadows! will they never end!  
'Tis a vile prospect—Gone to see a friend!

However, all ends happily—Laura and her  
friends are kind. The lover stays a night with  
them and the next day he rides back to  
Beccles with her in a state of trance in which  
the eye "roved o'er the fleeting views" with-  
out so much as seeing them. If the ghost  
of old George Crabbe, sometime Curate of  
Rendham and Sweffling, still roams the banks  
of Alde and Waveney with his faithful Sarah,  
may it be in such a state of ecstasy



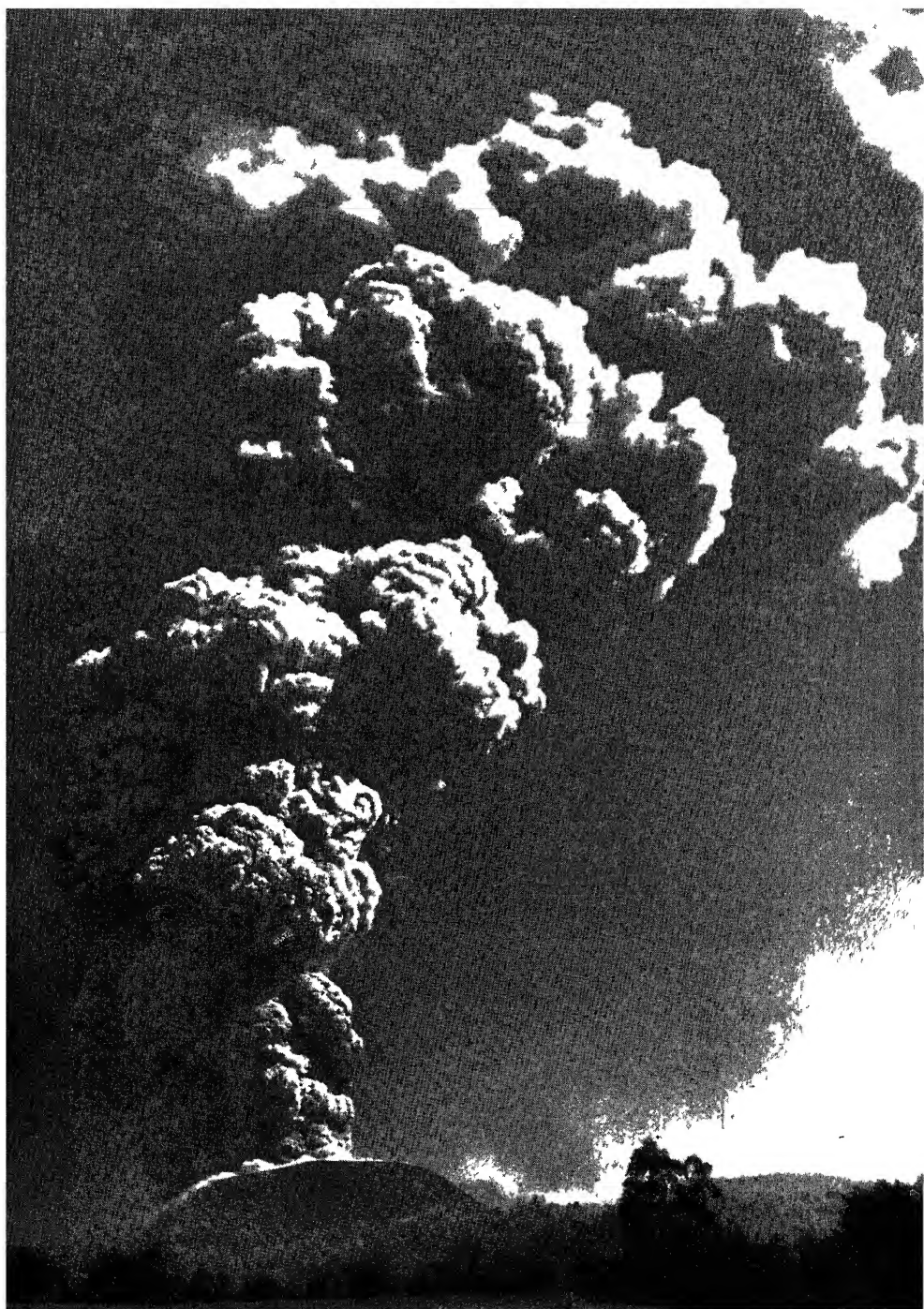
# The Birth of a Volcano

by T IFOR REES, C M G

To few people has it been given to witness the birth of a volcano, and to fewer still to witness such a phenomenon on their own property. This probably unique experience fell to the lot of a humble Tarascan Indian peasant, named Dionisio Pulido, a native of Paricuti, a little village in the state of Michoacán, Mexico, about 20 miles, as the crow flies, west of the pleasant town of Uruapan (well known to tourists and celebrated for its lacquer ware).

Late in the afternoon of February 20, 1943, Dionisio, who had been busy all day plough-

ing his plot of land in a secluded valley or basin known as Cuiyutziro, less than a mile from the village, saw a sight that he will never forget. Here (in translation) is his own description of it: "It was Saturday afternoon, and the shadows were lengthening, I had just unyoked the oxen from the plough with which I had been turning over the soil of my little plot, and was about to start homewards, when from between the furrows I saw a snake-like column of white smoke arise, then another, and yet another, and then many more. Cracks began to appear in the soil, and from







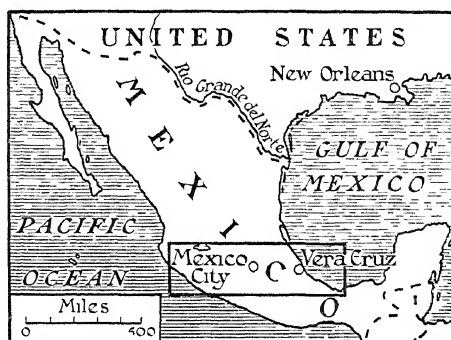
Stanford, London

below came a horrid noise. I left everything and fled. Having gone some distance, I looked back and saw a huge column of black smoke roll upwards."

The new-born volcano showed great activity from the very beginning, and in a few days had attained a height of about 150 feet above the level of the field where it had burst forth. This field itself is approximately 7700 feet above sea-level. As the volcano grew, its activity grew also. It erupted, and continues to erupt, masses of incandescent material as well as vast quantities of sand. There appear to be three chimneys within the crater, all going full blast, so that there is practically no pause in the ejection of material. There is a constant roar which, from a distance, sounds like a waterfall. Most of the incandescent stuff is thrown out on the east, or north-east side, where the rim of the crater is lowest, and the lava mass thus formed has slowly gravitated round to the north side of the volcano. It has already reached the mouth of the dell leading to the village of Parícuti, and if its progress continues down this dell for another quarter of a mile, the village, already half smothered in sand, is doomed.

The volcano, which has been christened Parícuti after the village which it threatens to destroy, is, as I write, about eight weeks old, and has attained a height of roughly 800 feet. According to the calculations of engineers and geologists, it is ejecting over ten million tons daily. The countryside for many miles around, particularly to the north and east, is covered by a thick layer of sand which,

*The volcano of Parícuti from the north at a distance of about a mile and a half. The little village of Parícuti, after which it was called, lies among the trees on the right.*



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in the vicinity of the volcano, lies at least a foot deep over the farm lands of the inhabitants of Parícuti and of the nearby larger village of Parangaricutiro—affecting in all a population of about 4000. These lands are ruined for years to come, even were the volcano to cease activity now, so that the prospect before these poor people is certainly a gloomy one. To make matters worse, their forestry activities have also been affected by the volcano. There are extensive pine forests in this region, and the tapping of the trees for resin is a source of livelihood to many of the local inhabitants. This livelihood is being destroyed by the sand from the volcano, for the cups attached to the tapped tree-trunks get filled with grit.

Fine dust has been carried by the air currents as far as Mexico City, about 200 miles away to the east in a direct air line, but in general the sand-laden clouds of smoke go north-north-east, depositing sandy dust over northern Michoacán and the state of Guanajuato.

Both by day and by night Parícuti is a magnificent spectacle. By day the dense volumes of smoke pour upwards in rolling, swirling, revolving masses to a height of about



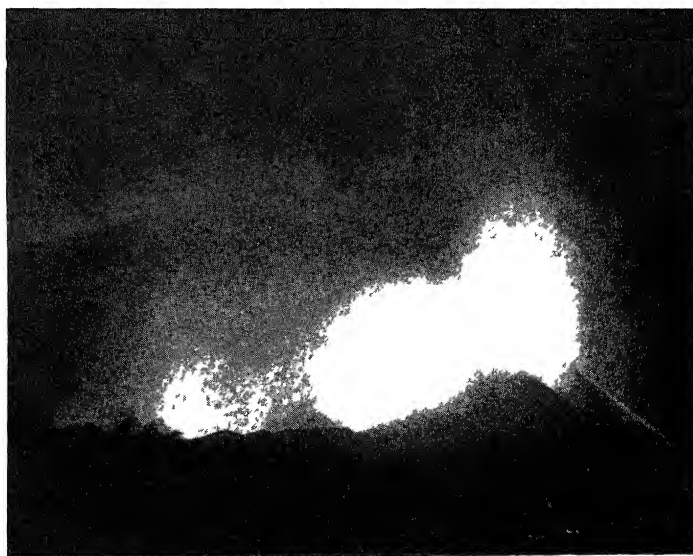
3000 feet, where they meet air currents which carry them away to the north and east. These billowy fleece-like masses, as they swirl powerfully out of the crater, range in colour from white to black, with every shade of grey in between. Occasionally there is an electrical discharge within the huge pillar of smoke, followed by a thunderclap. By night, when the columns of smoke are not visible, the volcano is like an enormous blast-furnace, hurling into the air vast quantities of incandescent material which falls in a glowing shower on the slopes, covering them with a shimmering and ever-changing mantle of fire as the flaming rocks roll down.

This part of Michoacan is all volcanic, and dotted with extinct volcanic cones, each in its day a 'Paricutin'. Dominating them is the towering peak of Tancitaro, an extinct volcano, 12,660 feet high—the highest summit in the state. The abundance of small cones, varying in height from about 500 to 1000 feet, leads geologists and volcanologists in this part of the world to conclude that Paricutin is not likely to continue active for very long, at any rate on its present scale. Its birth and activities have naturally recalled those of the

volcano Jorullo, which came into existence in 1759, in this same state of Michoacán, in the region to the south-east of Uruápan. This volcano, after several months of much subterranean rumbling, burst forth in a small gorge on a fine estate known as Jorullo ('Tarascan for Paradise') and completely destroyed the estate as well as much other property in the region. It continued active for several years, though not on the scale of its initial activity, and attained an altitude of about 1230 feet before its growth ceased.

This Michoacan area would appear to be the weakest spot in the great geological fault which stretches across south central Mexico from the Gulf to the Pacific Coast. Many great volcanoes are found in this belt—Citlaltépetl, or the Peak of Orizaba, the highest mountain in Mexico (18,700 feet), Malinche, Popocatepetl, Iztaccihuatl, Ajusco, the Nevado de Toluca, the Volcano of San Andres, Tancitaro, the Nevado de Colima, the Volcano of Colima. It is therefore not surprising in this zone that, when there are disturbances 'down below', the pent-up forces striving for an outlet find a relatively easy way to the surface.

(Opposite) *The volcano from the east, with the lava flow in the foreground. The trunks of the trees had already been set on fire when this photograph was taken.*  
 (Right) *A night view taken on March 2, 1943. The dark mass of the lava flow can be seen in the foreground. As the mass moved, chunks of partly cooled crust fell down with a great clatter, and momentarily revealed inner fires. These are the 'glow spots' in the photograph.*



*Photographs by the author*



# Work and Wealth of Madagascar

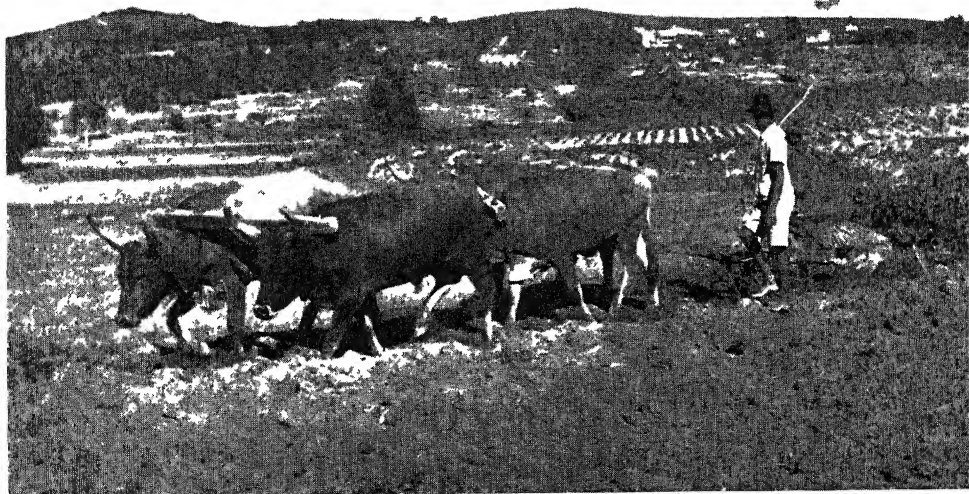
by A M CHIRGWIN, D D

*My previous article on Madagascar appeared in The Geographical Magazine in August 1942, shortly after British troops landed there. Since that time the island has come under the control of the Free French, and life has become fairly normal again.*

*The central plateau of Madagascar consists of well-cultivated rice-fields in the river valleys and rolling bare hills. The villages nestle comfortably among tall eucalyptus trees. The country is so well-watered and the soil so naturally fertile that food shortage is rare and famine unknown, save in the wake of a destructive cyclone.*

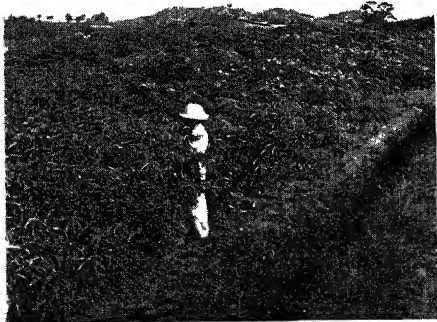
*Rice is both the staple food and the chief export. The seed is usually sown in a sunny plot and when the young shoots are a few inches above the ground they are transplanted into the larger space of the rice-field, where the soil has been turned over, well trodden by oxen, and flooded with a foot or so of standing water. The transplanting is mostly done by women who, almost knee-deep in muddy water, push the young plants into the deep, soft mud. A quick worker will often deal with over 150 plants in a minute. The crop grows and ripens with great speed, and when it has been harvested the husking*

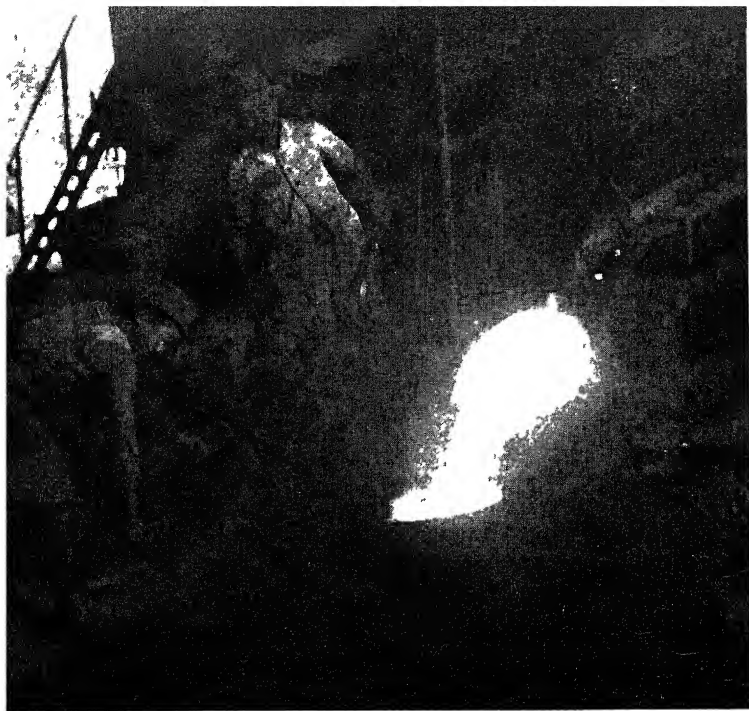




*Photographs from the Ministry of Information*

as done by pounding the rice in a rough wooden mortar. In recent years, however, a few mills have been opened from which the rice is taken in ox-carts to the coast for export. In the little Malagasy fields the turning of the soil is still done by hand and the long-handled spade is the only implement used, but now that Europeans are developing agriculture a larger use is being made of oxen for ploughing and harrowing as well as transport, and crops for export, such as manioc (tapioca) and maize, are increasingly grown. The pictures on this page show these crops being tended.





*The mineral wealth of Madagascar has not only never been adequately developed, it has scarcely been surveyed. Iron, copper, lead, silver and gold are known to exist, indeed for many years they have been mined but mostly on a small scale. Iron-ore in particular exists in abundance, and has been worked from primitive times. In recent years modern methods of smelting and working iron have been introduced and the Malagasy have shown considerable aptitude for skilled industrial work.*

*They are clever with their hands and soon become good craftsmen and mechanics.*

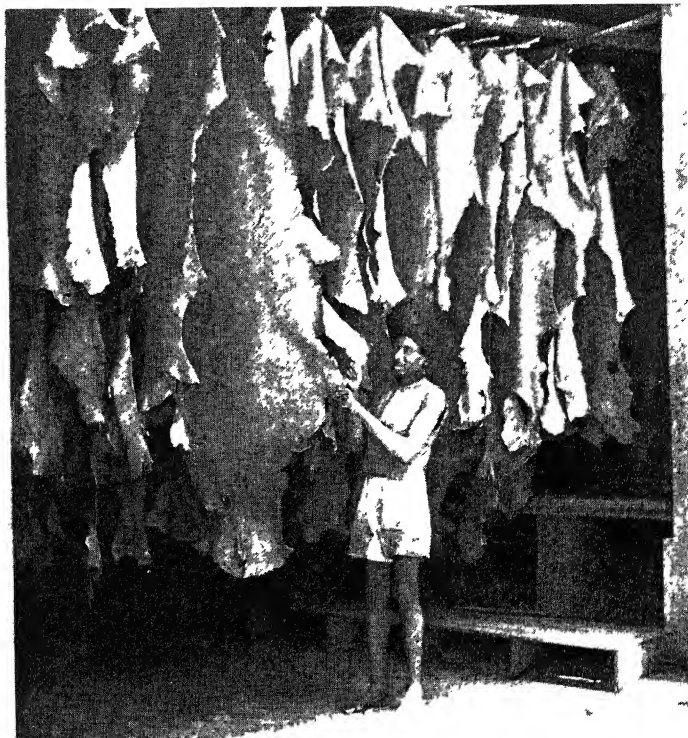
*For a long time nothing was done, except in a few mission schools, to give industrial training, but today many of the government schools in the larger towns have good handicraft and industrial departments. The Malagasy have been spoken of as the artists of the southern hemisphere, and their artistic ability together with their newly awakened machine-sense should enable them to reach a high level of craftsmanship.*

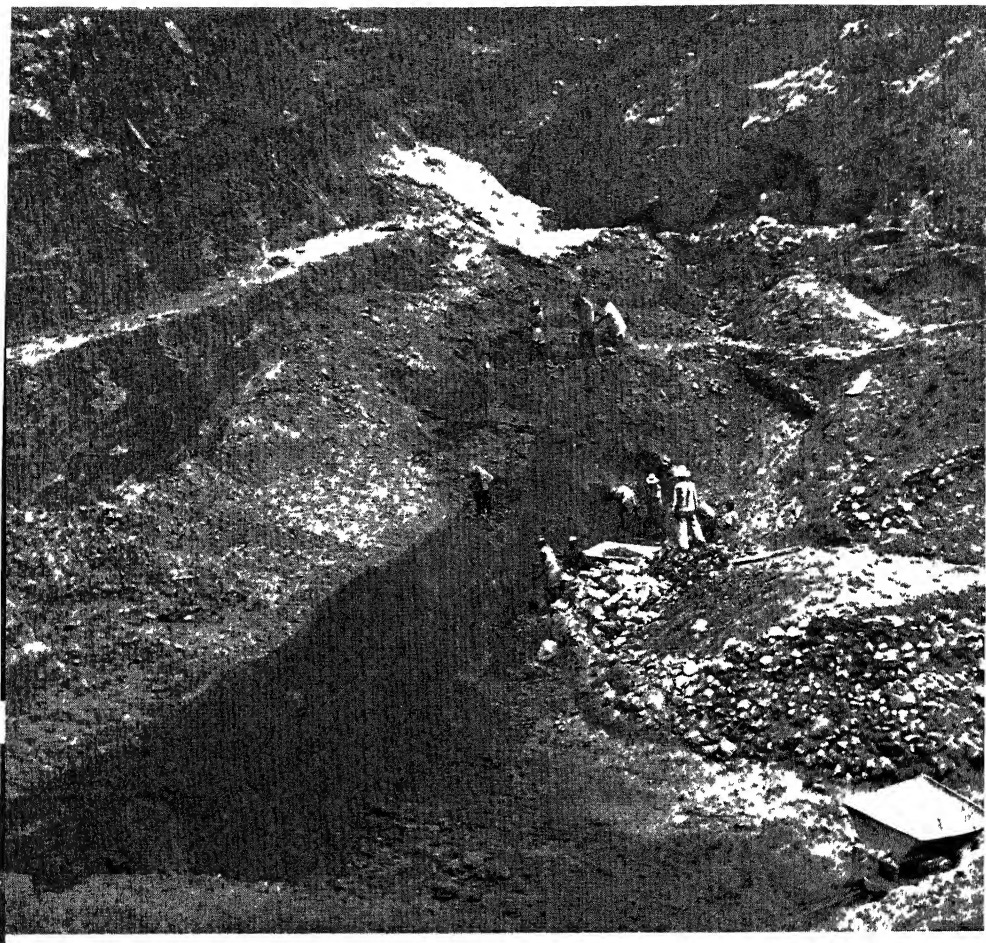




The earliest missionaries, some of whom were skilled artisans, finding that Madagascar was peculiarly suited to cattle-raising, introduced tanning, which quickly grew to be one of the chief industries of the island. It is claimed that there are more oxen per head of the population in Madagascar than in any other country in the world. And since the Malagasy ox reaches a good size, its hide is valuable, and the tanning and export of hides has grown to be a very profitable industry. Up till the beginning of the war hides were exported to France to the annual value of many millions of francs.

The great herds of Malagasy cattle have also made possible the development of the meat-canning industry. Madagascar is the normal source of supply of the 'bully-beef' of the French army. In view of the fact that for two years from the collapse of France there was a close blockade of the island vast stores of canned meat, rice, hides and other goods have probably been accumulated and are awaiting export.



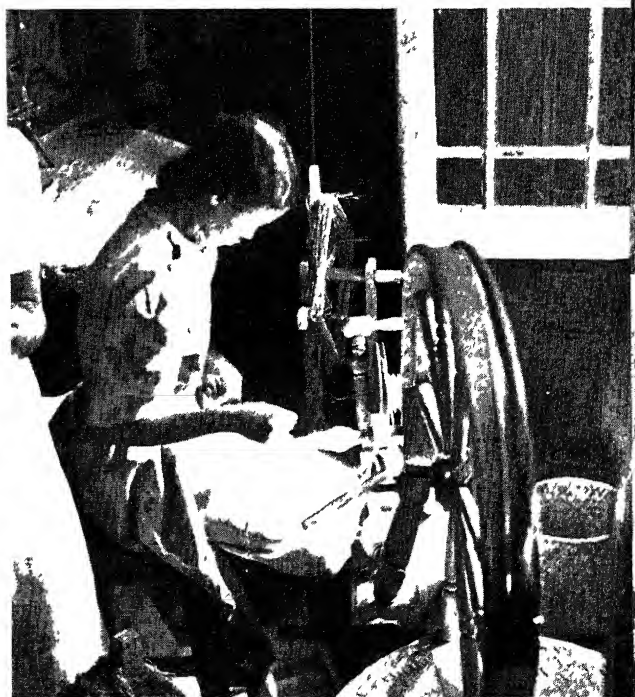


*Graphite abounds in the island Where the heavy downpour of the rainy season has washed away the soil from the hillside, seams of it can often be seen and on a sunny day the shallow beds of rivers often gleam and glitter with the myriad minute deposits of mica and graphite At one time large quantities of graphite were exported, but for some reason the amount has dropped considerably in recent years*



Hat and mat making are old-established crafts of the Malagasy. The hats are made of rush and sedge, but those that are intended for export are made of finer materials and have the qualities of a 'Panama'. Many thousands are normally sold on the European market every year. In mat-making the Malagasy have few rivals. Some of their mats are as soft and pliant as cloth, and now that imported cloth is unobtainable the Malagasy have been forced to make their clothes out of raffia grass and similar home-grown materials. They grow a certain amount of coarse cotton and produce a little silk, but in both cases it is on a small scale.

There is one garment which for generations they have been accustomed to weave in their own homes, namely the famous lamba or distinctive national dress of the Malagasy. It is a kind of shawl, generally white or cream-coloured and worn close up to the throat. For special and festive occasions a coloured lamba is worn, the colour and pattern of which differ from tribe to tribe, like the tartans of Scottish clans. These coloured lambas are often presented to parents by their children as a token of respect, and are eventually used as shrouds.



# The Tribute of the Three Cows

by RODNEY GALLOP

SUMMER comes late to the Pyrenean heights on the Franco-Spanish frontier. Only at the end of June do melting snows open the highest passes and allow the sheep and cattle to make their slow way upwards to the mountain pastures where for a few short weeks they crop the fresh, springy turf before escaping to the foothills from the first snowfalls of approaching winter.

Lying abed on hot June nights in Pyrenean valleys you may hear the herds come jangling through with the "rough music" of their bells of every size and pitch, cacophonous at first, but seeming through its insistent repetition to take on a purposeful rhythm and melody. This music is the *leit-motiv* of a tradition as old in these wild valleys as man himself, the tradition of the herdsman who first broke with the nomad life of the hunter and paved the way to settled agricultural life.

Today shepherds and herdsmen still pursue their avocations unperturbed by outside events as they did when Romans and Moors passed that way, living out their lives to the rhythm of the seasons, guided by rules and customs as immutable as the rugged peaks of Anie and Midi. Artificial borders drawn to suit the whims of tyrants and warring factions mean little to them, and all along the frontier their relations are governed by local agreements known as *faceries*, dating from the Middle Ages and maintained in undiminished vigour by the good faith and good sense of those whose ancestors first set their seal on them.

It was therefore with no surprise that many years ago I first heard of the Tribute of the Three Cows which, in virtue of a treaty concluded in 1375, the inhabitants of the French valley of Baretous in Béarn pay annually on July 13 to those of the Spanish Basque valley of Roncal in Navarre.

It was not till 1939 that I was able to be at the right place at the right time and thus to attend the 564th celebration of a custom which must be unique in modern Europe. The *pedra de San Martin*, where the tribute is paid over, is a remote and inaccessible spot on the very frontier, 6000 feet above the sea to the west of the Pic d'Anie. The nearest

sleeping-place is Ste Engrâce, the last Basque village, 3000 feet above sea-level in a gloomy amphitheatre of mountains. Here we spent the night with the innkeeper, Monsieur Hondagneu, who was our guide at dawn next day on the steep, rough climb to the meeting-place.

It was an unpropitious morning. There had been heavy rain in the night, and, although it was no longer falling, clouds hugged the hills. Striking steeply up a mountain-side clothed in dense forests of beech and chestnut, we were soon wrapped in mist. We were a numerous party, like the Basques in berets and espadrilles setting a gruelling pace to those others who, like ourselves, had been drawn by historical curiosity from further and flatter lands. Misty figures flitted before us, and we could divine the turns in the path ahead from scraps of Basque song which came floating down together with fragments of talk in that ancient, sonorous tongue, and the weird, laughing, neighing, prehistoric cat-call of the *urrintzina*.

After two hours of steady climbing we reached the tree-line, and almost immediately the clouds began to lift. In a few minutes they had fallen like a discarded cloak at our feet, and over the fleecy sea we could look westwards along the jagged line of summits to the Pic d'Orhy. Far away to the left a straggling line of figures were those who had chosen the longer but less arduous route from Arette, the chief village of Baretous.

A little before nine we converged at the appointed spot. St Martin's stone proved to be nothing more exciting than a frontier stone like any other. There was no sign of the Spamarads as yet, so we crossed a few hundred yards into Spain, trusting that the absence of passports would not be taken amiss. The change of landscape was almost startling. Where there had been beech forests and green sward we now looked out over an arid waste of rock, flecked with snow and cross-hatched with a few scattered firs. Hull-down over the rugged uplands rose the triangular Pic d'Anie, westernmost of the Pyrenean giants. At our feet lay a little

*Only in midsummer  
are the highest Pyre-  
nean passes open,  
while the snow hangs  
on the southern slopes  
of the Pic du Midi  
d'Ossau, seen from  
the Col du Pourtalet*



*All photographs by the author*

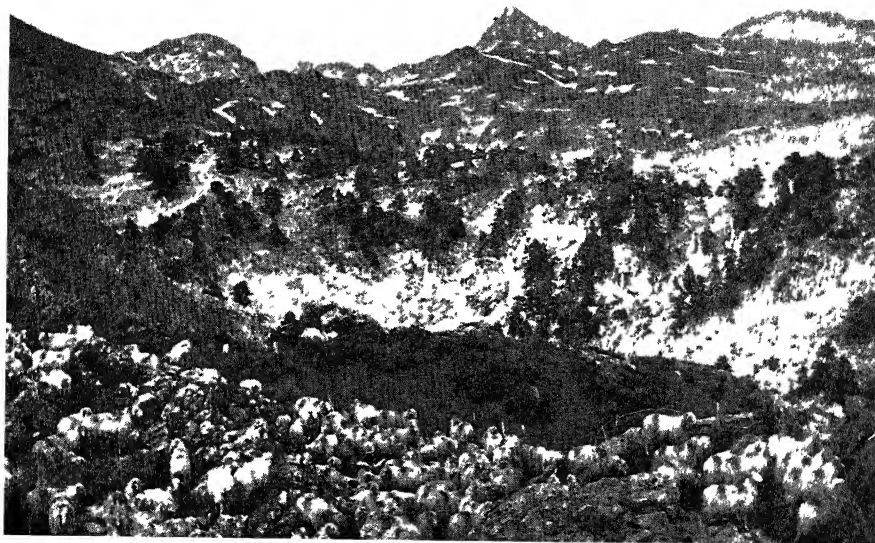
*The Pyrenean sheep  
and cattle make their  
way upwards to the  
mountain pastures to  
crop the fresh, springy  
turf for a few short  
weeks before the first  
snowfalls of winter*



*Above the tree-line  
the clouds fall away  
like a discarded cloak  
and over the fleecy sea  
one looks westward  
along the line of sum-  
mits to the Pic d'Orhy,  
seen behind on the right*







*Beyond the Spanish frontier the landscape changes abruptly to an arid waste of rock, flecked with snow and cross-hatched with scattered firs, rising to the triangular Pic d'Anie*

gully from which a path led over a shoulder and out of sight. Even as we watched, this path suddenly came alive. Little brown figures crawled over the shoulder and strung themselves ant-like down the trail. The Spaniards were arriving.

It was not long before they reached the frontier and, after an exchange of greetings, the ceremonies began under the direction of the *Alcalde* (Mayor) of Isaba who, for the occasion, had put on his traditional hat and robes of office. At his order the delegates of each party took up position, each on his own side of the frontier stone. Then, in a loud voice, the Mayor addressed the French representatives.

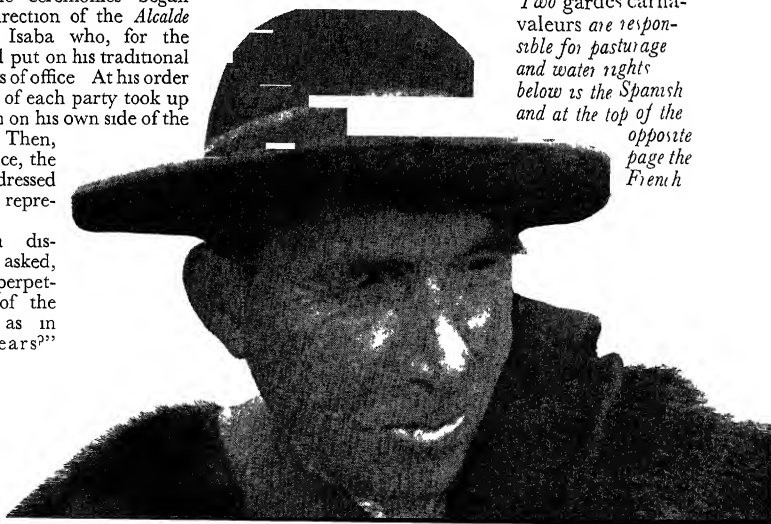
"Are you disposed," he asked, "to pay the perpetual tribute of the three cows as in previous years?"

160

This question he repeated three times, and thrice the answer came "We are."

There now followed the most curious moment of the whole ceremony. The chief French representative laid his right hand on the frontier stone, and over it one of the Spaniards placed his own. The other dele-

*Two gardes carnavaleurs are responsible for pasturage and water rights below is the Spanish and at the top of the opposite page the French*





gates followed suit, a Spanish hand always superimposed on a French, that of the Alcalde crowning the pile. Then the last-named pronounced three times the mystic words *Paz Aban*, which were interpreted to me as meaning "Peace henceforward." Next he called upon any of those present who might have any claim or complaint to come forward. There was no response, and he was able to proceed to the swearing-in of the two *gardes camavaleurs* who were responsible during the coming year for the respect of all rights of pasturage and water. To his question whether they swore to fulfil their charge faithfully each in turn replied, "I do."

Meanwhile the Spaniards were choosing from a little knot of heifers the three which they would accept as tribute. The choice once made, however, they did not drive them over the frontier but sold them back to their French owners, a mercenary innovation of later days. This concluded, they invited us all across the border into the gully where a lamb was being roasted whole on a spit, and leather wineskins were circulating with the strong, red wine of Rioja. Here, the serious business of the day completed, we remained in international amity until it was time to cross back into France and drop down through the rain-soaked forest to Ste Engrâce.

What is the origin of this remarkable tribute? My inquiries in and around Baretous enabled me to piece the story together. At Arette I was able to see and photograph the famous treaty of 1375 which is preserved in the village records. But the treaty merely carries the story further back, for it does no more than confirm that "the inhabitants of the valley of Baretous have been from all time

in the habit and custom of presenting three two-year-old female heifers to the inhabitants of the Valley of Isaba (Roncal) each year on the fourth day after the Feast of the Seven Brother Martyrs and to hand them over to the said inhabitants on the limits of their territories"

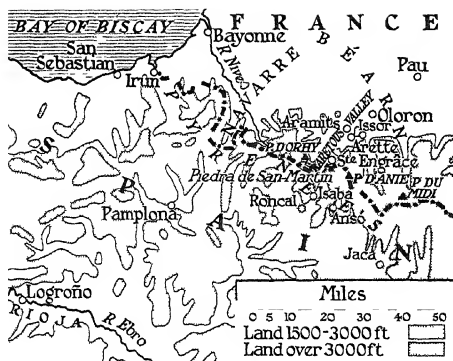
"From all time!" According to a pamphlet published in Madrid in 1881 the matter goes back to an invasion by Cimbrian tribes from North Germany in 125 B.C. The 16th-century Basque historian Garibay more modestly traces it back to the 9th century, but all that can be stated with any certainty is that its origins must be sought in the disturbed conditions which prevailed on the frontier in the Dark and Early Middle Ages.

Of these times I was able to pick up in Baretous a legendary echo, obscure and fragmentary. One day, while celebrating Mass, the Cure of Isor saw a drop of blood fall suddenly upon the missal. Interpreting this as an omen that the Spaniards were invading the valley, he called his parishioners to arms and sent them up into the mountains to repel the invader. Before them went a woman



(Below) From a little knot of heifers the Spaniards single out the three claimed as tribute  
(Right) Hand over hand, the French and Spanish representatives swear on St Martin's stone to maintain peace for the coming year





who hit upon the stratagem of stripping off her clothes, covering her body with honey and rolling in a bed of feathers so that she assumed the appearance of a strange bird. Presenting herself thus to the Spaniards, she so provoked their terror of the supernatural that they all fell to their knees and in this position were surprised by the French, who slaughtered them to a man. Some say that it was this very incident which gave rise to the tribute, but this cannot be established, for it is only in the year 1373 that its recorded history begins.

In this year, according to old documents preserved at Isaba, the traditional payment lapsed owing to a series of frontier incidents. Quarrels between shepherds had culminated in the murder of one Pierre de Sausoler of Baretous by Pedro Carrica of Isaba. The valley notables met at Aramits and despatched a punitive expedition to avenge the victim under the command of his cousin Augnar Sausoler. Seeking the murderer in vain, they found only his wife Antonia, whom they killed, together with her unborn child, in circumstances of great brutality. This so incensed the people of Roncal that they sent out a force under Pedro Carrica which fell upon the Sausoler family at their evening meal. Pedro told Augnar's wife that, though he had her at his mercy, he would spare her life and that of one other whom she might choose. Her choice fell not on her husband but on her brother.

The series of skirmishes which followed forced Carlos II of Navarre and Gaston Phébus of Foix and Béarn to promote an attempt at mediation by four bishops, those of Jaca and Pamplona in Spain and of Bayonne and Oloron in France. Not only was this a failure, but the priests of the two valleys, meeting for three days on the frontier at the very spot where the tribute is now paid, failed to arrange matters.

In the last resort the people of the neighbouring Aragonese valley of Anso offered their mediation. The names of the judges are still preserved: Sancho Garcia the Mayor, Ifugo Jiménez, Jimeno Robet, Juan Lopez, Sancho Jiménez and Bello Aznarez (a member of the Aznarez family was one of the Roncal delegates in 1939). Conflicting evidence constituted the principal problem. One deposition made before them declared that the tribute of the three heifers "without flaw or blemish" was a reparation for the killing of Roncal men by those of Barétous, while other witnesses held it to be a payment for pasturage rights.

The judges' verdict was that the tribute should continue to be paid, "it being clearly established by the said deposition that the inhabitants of the Valley of Baretous, and in particular those of Arette, were accustomed to be the first to enter into the said places and pasture their flocks and herds each year." So, for the future they were to enjoy the disputed pastures for twenty-eight days from July 14 each year, after which the Spaniards were free to use them till December 25, both parties being required to withdraw from them at night-time. The people of Barétous were to be freed from all further responsibility for past offences. Lastly, the arbitrators imposed "eternal silence" in regard to any other claims and a truce of 101 years. Even they could hardly have anticipated that their decisions would be respected for more than five times that length of time, and that in spite of local troubles which broke out in 1460 and 1642 the terms of their award would be incorporated in every territorial treaty between France and Spain down to that concluded at Bayonne in 1856. Nevertheless, year by year the ceremony sheds some of its more picturesque details. The men of Roncal once came armed to the meeting, and the Sword Dance was performed on the very border. The French laid a lance horizontally on the ground along the frontier while the Spaniards placed one across it, "the point entering French soil for at least eight inches." Finally a Spanish sword was plunged defiantly into French soil and three muskets loaded with blank were fired in the direction of the French, who remained with their standard lowered in sign of homage. It was apparently to soothe French susceptibilities that these details were dropped from the ceremony.

But the people of Baretous have no need to stand on their dignity in this respect. In these days of broken pledges and worthless engagements they still observe to their own disadvantage the terms of a treaty which others less scrupulous would long ago have denounced as unequal and out-of-date.



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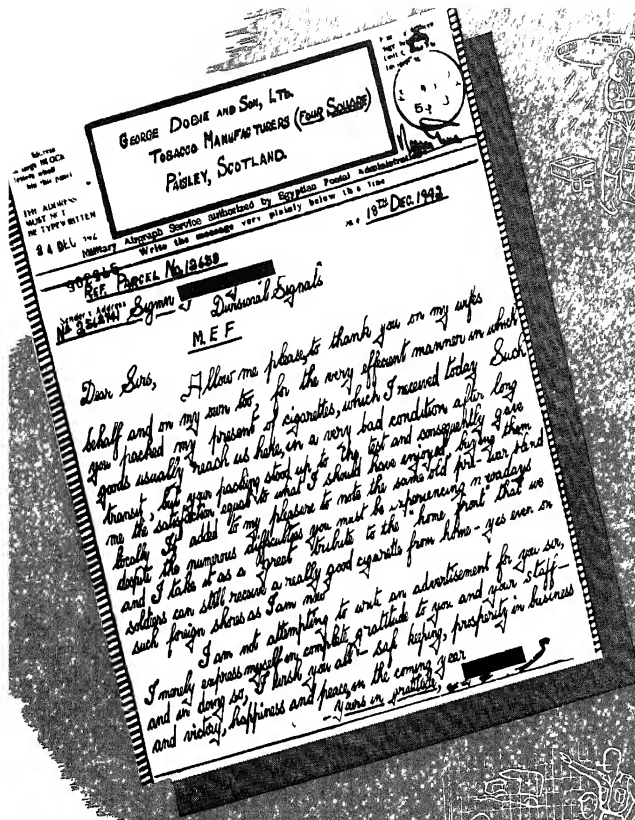
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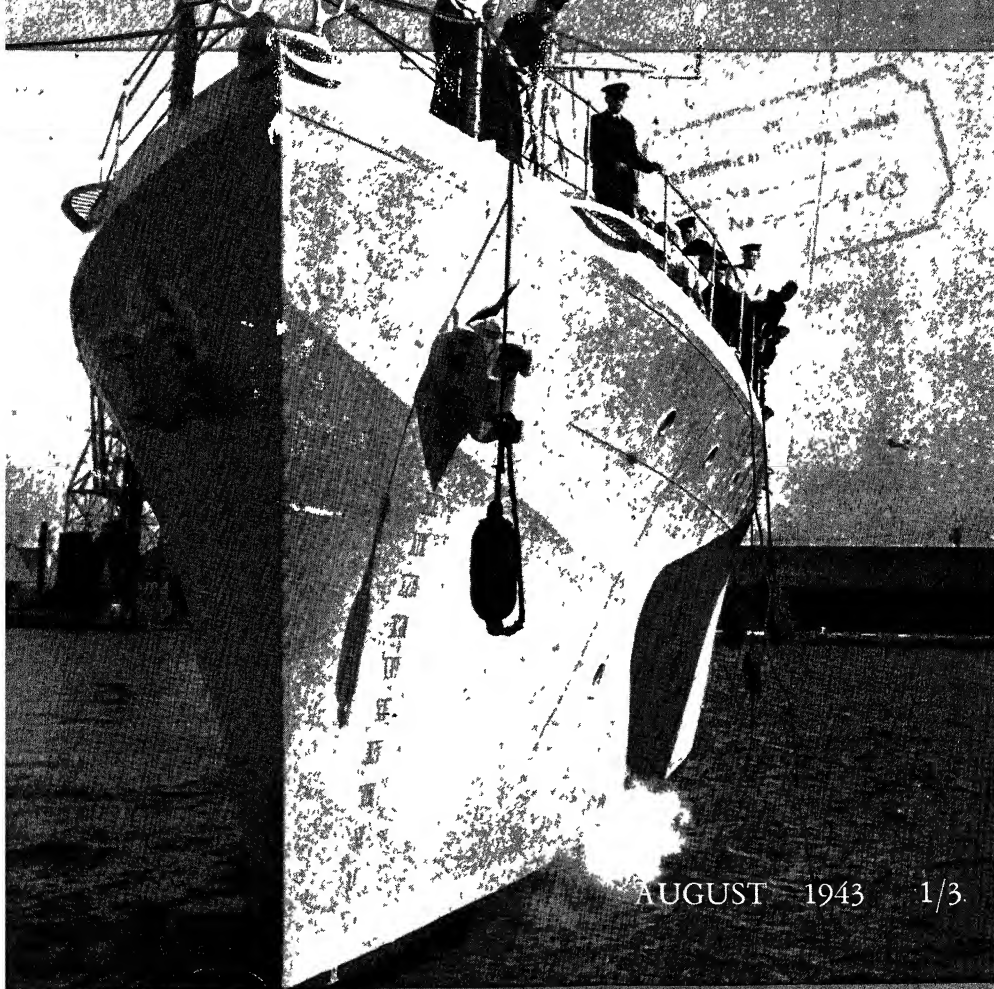
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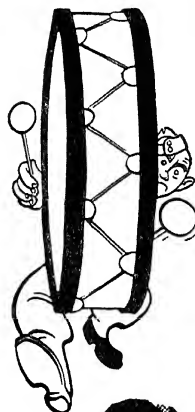
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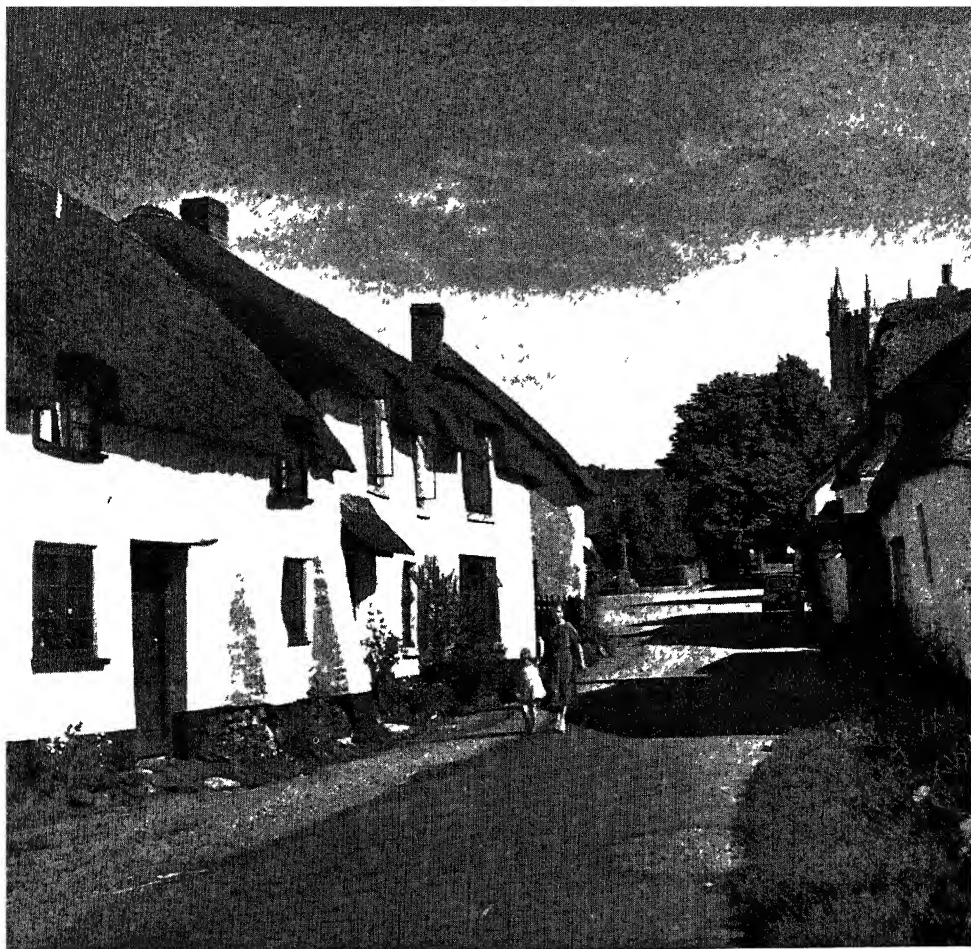


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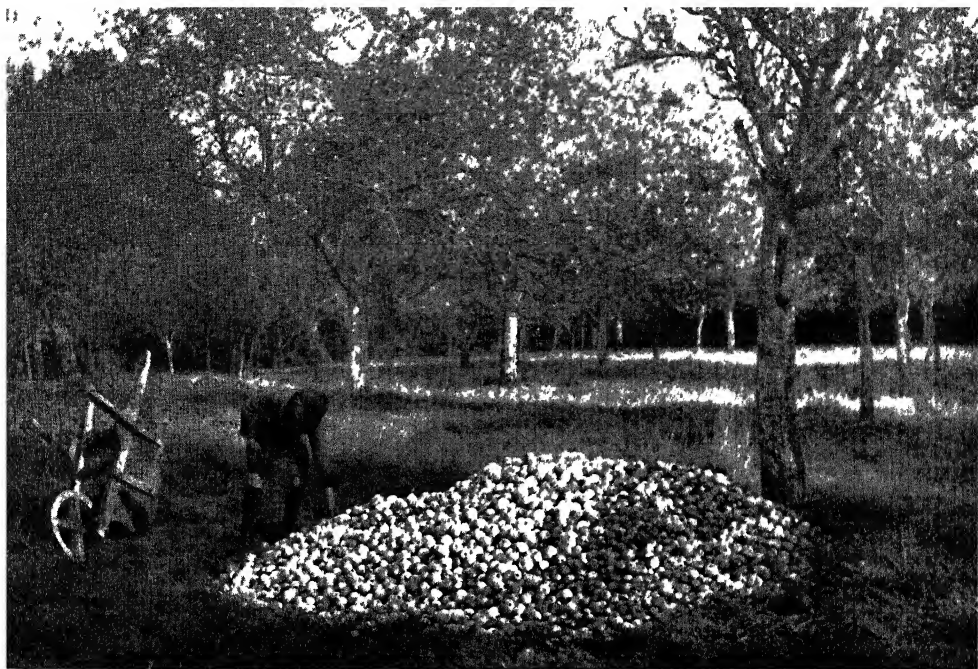




# Cider-Making in the West Country

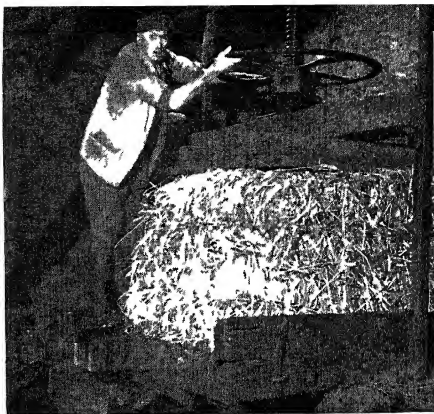
Notes and Photographs by G. T. Holford

*In spite of the war the West Country farmer still makes his cider his staple drink. Every year the old presses which have sometimes been on the farms for generations are brought into use. There is an art in making farmhouse cider and it varies according to the manner in which it is made. Some is rough and unpalatable, but when really good it has a rare delicacy of flavour with a 'punch' behind it. The picture above is of Broad Hembury, a characteristic Devon village near Honiton in the heart of the West Country cider-making district.*



*The apples, when ripe, are shaken from the trees or brought down by means of a long, whippy pole. They are gathered up in pails and piled onto a heap, where they remain for about a fortnight, to soften, before being bagged and carted to the presses. The first process in the manufacture of cider is to pass the apples through a mill (shown below), where they are pounded into a pulp. The machine consists of meshed rollers called 'tumblers', onto which the apples are fed through a hopper.*





*The pulp is known locally as 'muck' It is shovelled out of the bin and spread over the press in a layer about nine inches deep Over the pulp a thin layer of straw is placed, overlapping by a foot or so all round Alternate layers of pulp and straw are added until the pile is three or four feet high After each layer of pulp is placed, the overlapping ends of the straw are turned up The completed layer is called a 'cheese' On completion of the cheese a pressure board is placed on top, and the cheese is reduced to a thickness of about nine inches The compressed cheese is broken up and built up once more, this time without the straw, and again pressed until dry*





The cider, which is caught in a tub placed under the press, is strained and poured into casks through a large wooden funnel until the cask is full right up to the bung hole. The bung must not be inserted or the cask would burst when fermentation takes place, and the scum would be prevented from escaping. It is essential that the scum should overflow, as it carries with it all the impurities in the cider and oozes out of the bung hole in the form of a yellowish white froth covering the whole of the outside of the cask. When fermentation is at its height, which is indicated when a lighted match placed over the bung hole is extinguished, the cider is drawn off and transferred to a clean cask for storage. It is usual to store the cider in hogsheads (54 gallons) but the bigger the cask the better it keeps. A ton of apples will make about 150 gallons of cider. In the old days it was customary to put a beefsteak into a cask to improve the quality. Nowadays a bottle of whiskey or rum is sometimes added.

A glass of last year's cider sometimes helps along the work.

Cider is made from a variety of apples the softer the apple the better the yield.

To ensure a good crop it was customary, up to ten years ago, to hold a ceremony known as wassailing the orchards. Shortly after Christmas Day, farmers armed with shotguns would gather together and visit each





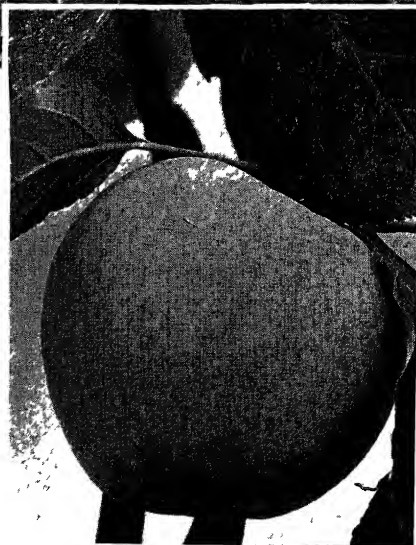


orchard in turn After repeating the following incantation

Wassail—Wassail in our town  
 The cup is white, and the ale is brown  
 The cup is made of the best clay\*  
 Come pretty old fellow, I will drink with thee\*  
 I hope your trees will bear and bow  
 Apples, pears and plums I vow  
 Hat fulls, cap fulls, three bushel bags full  
 All down under all trees  
 Hoorah! Hoorah!

\* 'thee' and 'clay' rhyme in the local dialect

the farmers would fire their guns at the apple trees, and then drink the health of the orchard in hot cider out of a two-handled mug. The owner of the trees provided the cider in a milk-bucket, with baked apples and toast floating on it. It was said, towards the end of the rounds, that the apples could be seen growing on the trees





*High Commissioner for India*



*Government of India by permission of Arthur Probstham*

(Above left) *The Indus plain as it is today*, (right) *Mohenjo-daro before excavations* (Below) *one of the lanes revealed by digging*, (bottom) *the results of deep diggings, the latest house floors were flush with the top of the well, which is seen standing like a factory chimney*



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*Professor V Gordon Childs*

it was this same urgent necessity that conferred survival value on economic centralization and the synoecism of villages into cities. The villages that we know in Egypt and Mesopotamia have still to be assumed in the Indus valley, we know only the cities. They are numerous and large—far removed from the hypothetical rural precursors.

In lower Sind, along the Indus between Hyderabad and Sukkur, an area systematically explored by Mr Majumdar who lost his life in the work, six large sites have been identified, two—Chanhudaro and Mohenjo-daro—partially excavated by Dr Mackay and others. Four hundred miles further north huge mounds at Harappa mark another city site, bricks quarried from the runs provided balast for a hundred miles of the Karachi-Lahore railway last century, but a good deal remains and has been scientifically examined under Mr Vats.

The sites are marked today by groups of huge mounds, covering a full square mile at Mohenjo-daro and more at Harappa. Excavation reveals blocks of brick houses separated by wide streets and intersected by narrow tortuous alleys. The streets, that may be anything up to thirty-two feet wide, have been laid out on a regular plan, intersecting at right angles and running north-south and east-west. The enormous built-up areas, occupied generally by two-storied houses, convincingly attest the magnitude of the urban population.

The height of the mounds less reliably indicates the long life of the cities. It is due to repeated reconstruction of the buildings in each block. On each occasion the ground-floor walls were left standing five or six feet





*High Commissioner for India*

*The river Indus and the modern town of Rohri*

high and the rooms within them filled up with mud brick or rubbish to that height, above which the new building started. Thus the floor levels at Mohenjo-daro were raised nearly 20 ft. during six architectural phases (three 'Intermediate' and three 'Late'), during 'Early' periods they had been raised perhaps as much above the original ground level that has nowhere been reached by the excavations.

Now the city had been twice washed by the waters of disastrous floods, the second followed, apparently, by a temporary desertion of the site, and similar catastrophes have left traces at other cities. The later buildings were certainly far beyond the reach of any flood. But security from this peril is probably not the reason for the repeated raising of the floor level, actually the flood-laid sediments are found only on low ground outside the built-up areas. Household-ers were compelled to raise their floors for another reason that will not startle anyone familiar with the East today.

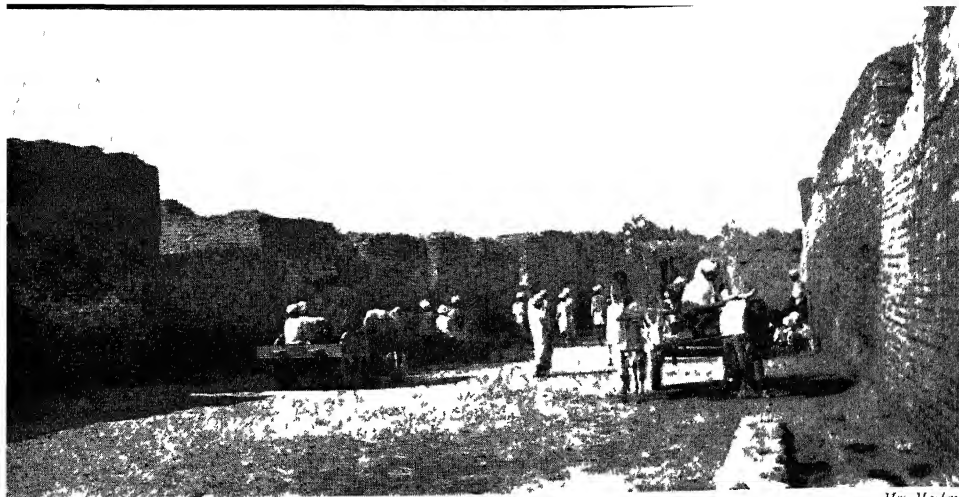
Refuse from the houses gradually choked the narrow lanes between them till the ground-floor rooms became cellars into which you would have to step down from the street. That might happen in modern India, and the appropriate remedy is to fill up the 'cellars' and add a new storey, just as the Bronze Age people apparently did. The visitor to an Indian town today will remember that the blocks of close-built houses seem to stand on little hillocks raised above the level of the larger open spaces.

A curious by-product of these reconstructions must be mentioned to enable the reader

to understand any photograph of the excavations. In each block at Mohenjo-daro one or two wells were sunk to tap the subsoil water. At each reconstruction the well-shaft was naturally raised to the level of the new floor. Modern excavators who have had to clear away later and higher walls to uncover older constructions beneath have nevertheless left the well shafts standing to the topmost ring as permanent marks of the successive building phases. In deeply excavated areas they stand like great factory chimneys towering 20 ft. above the Early walls.

The deliberate town planning revealed by the excavations in itself implies the existence at least of an effective municipal government. The continuity of its authority is indicated by the preservation throughout all rebuilding of the approved plan, save in the last two Late layers. Confirmation is afforded by the magnificent drainage systems in all the cities and by the circumstance that the drains are connected with sumps and cesspits that must have been periodically cleared out, and that naturally by public functionaries.

The analogies of Egypt, Mesopotamia, Crete and China would lead us to infer that, with the still rather inefficient equipment available in the Bronze Age, the real capital, the reserves of foodstuffs requisite to support an elaborate urban civilization and large classes of merchants, artisans and officials who did not grow their own food, could only be collected by a centralized theocratic or despotic government from the cultivators of a large area, only by exacting as tithes or taxes the tiny surpluses over domestic needs producible by each Bronze Age peasant could



*Mrs. Mackay*

*High Commissioner for India*



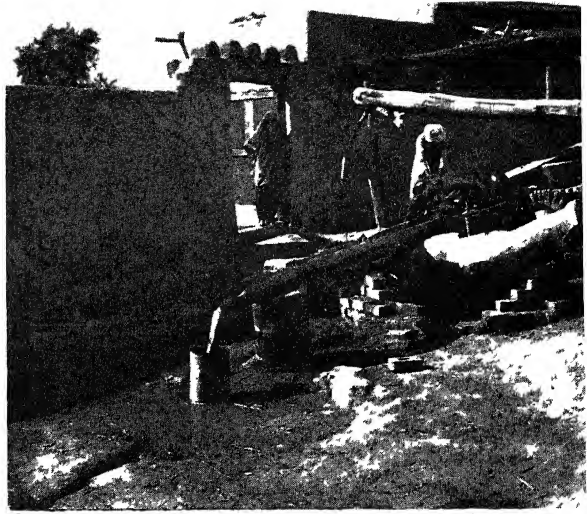
an adequate store be concentrated to feed the new classes and pay for imports of indispensable raw materials

The stupendous tombs of the Pharaohs, for instance, would show, even in default of all literary testimony, how the surplus produce of the Nile valley was concentrated in the hands of a divine monarch under the Old Kingdom. So, too, the vast temple with its staged tower that forms the core of the oldest Sumerian cities would proclaim no less unambiguously how a deity with his human servants, the priestly corporation, concentrated the surplus produced by the Mesopotamian peasantry.

India's oldest architecture does not explicitly tell any similar story. At Harappa the largest building actually exposed is a great granary, covering 168 by 135 ft—significant enough, of course, as proof of how the urban organism was nourished by the stored surplus sucked in from the countryside. At Mohenjodaro a great bath is the most imposing edifice so far uncovered. Dr Mackay indeed cleared a block covering 220 by 115 ft and boasting two wells that he identified as a palace. But it differs only in its size and the thickness of its outer walls from a normal private house. No temple has been recognized at any site. So far, then, no one can say with confidence whether an Indus city's government were an autocracy, a theocracy or even peradventure a republic.

Nor can the extent of its authority be deduced from the remains. Was each city an

(Opposite top) One of the main streets of Mohenjo-daro. The presence of the Sindis of today, with their carts and oxen, gives an idea of its proportions, (below) drain, with corbelled roof, which served the great bath at Mohenjo-daro—the most imposing edifice so far discovered there (Right) Village water wells of primitive type are still used in Sind



High Commissioner for India

autonomous capital or were all incorporated in some large territorial state? At all sites from Chahūh-daro to Harappa the architectural remains and smaller relics are remarkably uniform, Sind and the Punjab enjoyed a homogeneous culture. It does not necessarily follow that they were politically united. The culture of contemporary Sumer was just as uniform, but written texts reveal that there each city aspired to autonomy and was often at war with its neighbours save when one, stronger than the rest, forcibly imposed internal peace for a time.

Now no fortifications have been found round any of the major cities though Dr Mackay believes that a chain of mounds well outside the residential area at Mohenjo-daro may prove to mark the line of a circuit wall. On the other hand, near the Baluchistan frontier, Mr Majumdar has discovered a small settlement commanding a frequented pass that seems to be defended by a stone rampart. It looks like a frontier post, perhaps one link in a system guarding a single oasis of peace that embraced the whole valley.

Within the older levels of the cities excavators have failed to find those evidences of hostile pillage that scar the ruins of Mesopotamian cities, confirming archaeologically the literary tradition. Groups of contorted skeletons, mostly from late levels, are held to show that in the last period the Indus cities were not immune from raids, but the slaughter might have occurred in some outbreak of internal lawlessness.

In general the Indus cities and their contents produce a relatively peaceful impression. Battle scenes were popular in early Mesopotamian art and to a lesser degree in Egyptian art too. Sumerian graves are furnished with a regular armoury of very efficient battle-axes, daggers, spears and arrows. No pictures of warfare survive from the Indus cities, the most warlike weapons are rather clumsy spear-heads, stone mace-heads and very rare dirks.

The houses and their contents illustrate at least a division of the population into economic classes and specialization of labour. Most of the excavated houses are two-storied, flat-roofed structures, covering from 30 by 27 ft to more than twice that area, provided with bathrooms and generally latrines too, of a distinct harem there is no evidence. Such dwellings might well belong to comfortable merchants, some of the downstairs rooms would do better as warehouses than living-rooms, like the modern Hindu's 'godown'. Some ground-floor apartments may have been shops, a water-seller's shop is particularly well defined. The smaller retailers, however, sold their wares on the broad streets in stalls, the brick foundations of which can still be recognized.

Over against these commodious mansions Mr Vats at Harappa excavated a block of meaner dwellings all monotonously alike. The standard plan was a mud brick enclosure, 55 by 30 ft, probably open to the air save for a tiny room, 12 by 7 ft, close to the



High Commissioner for India



*The methods used by craftsmen of the Ancient Indus Civilizations are reflected in village life in the Valley today (left) a primitive method of gold refining still in use, (above) the manner of basket weaving has seen little change through the centuries, and (opposite) the village potters of Sind use the same peculiar technique and tools as did their predecessors of the Bronze Age*

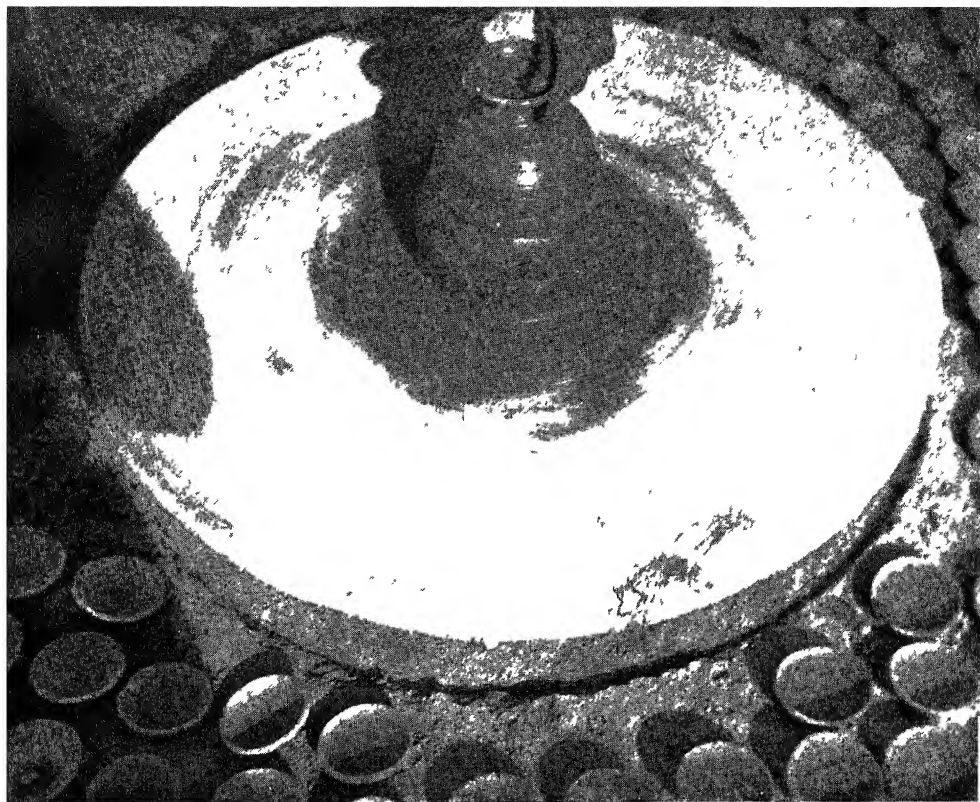
entrance and a larger one at the inner end measuring 23 by 16 ft. These blocks have been labelled 'the workmen's quarters'. But in one yard a hoard of gold bracelets and jewellery was unearthed.

But of the economic foundation of the urban pyramid, the farmers and fishers whose produce fed the citizens, the architectural record says nothing. Some farmers may have lived within the urban area, as in a classical or medieval city of the Mediterranean. But the large population implied by the ruins could not be maintained on the produce of fields within easy walking distance. Most of the cultivators presumably lived in hamlets of mud huts beside their plots. These have not yet been found, the ancient irrigation canals so conspicuous on the Tigris-Euphrates plain are not superficially visible in Sind.

Few agricultural implements—an ox goad, a pruning knife and some very doubtful stone ploughshares—have been found in the cities,

very likely, as in contemporary Egypt, the peasantry still used a 'neolithic' equipment of stone, wood and bone. We know that they grew wheat and barley (and probably various vegetables and fruits) as well as cotton, and bred several bovine species, goats, pigs and fowls. But the cities were not entirely dependent on the produce of local farms even for staple foods, dried fish was brought two hundred miles from the Arabian Sea to Mohenjo-daro.

The surplus foodstuffs not required for domestic consumption by the farmers supported much the same variety of specialized craftsmen as are found in the Bronze Age civilizations of Mesopotamia and Egypt, Crete and China. From their products and their tools we can recognize coppersmiths, goldsmiths and silversmiths, potters, shell-carvers, gem-cutters, engravers, sculptors. We may infer that weavers, several sorts of woodworkers, bricklayers, leather workers, basket and mat makers were likewise special-



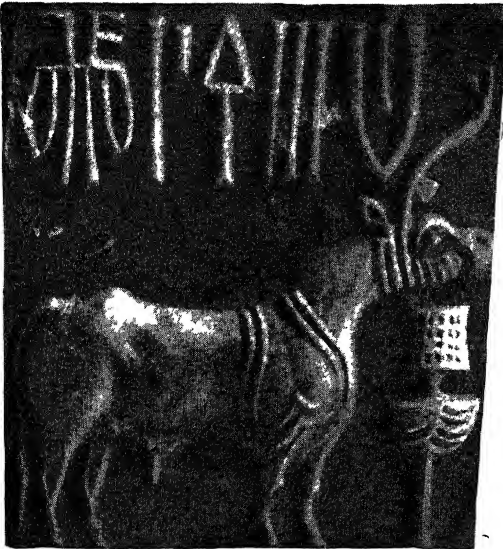
*Dorien Leigh*

ists Smiths worked bronze as well as unalloyed copper, but no iron. Potters used the same techniques and tools, including the wheel, as did their contemporaries in Mesopotamia, and turned out the same kinds of fabric. But they manufactured also more decorative vessels painted with handsome patterns in black on a red ground. Some vases were even coated with a genuine glaze, a technique not applied so early in western Asia or Africa. Some copper saws are identical with iron ones now used in peninsular India for carving shell. No woodwork can of course survive, but clay models of couches and carts illustrate what the carpenters could do. Both seem identical with those still used in Sind today.

To allow the crafts to function, organized trade was essential. An alluvial plain usually lacks not only metals but also good timber and building stone. Though the Indus plain is far from treeless, the local wood is of very poor quality for carpentry. In fact we know

the Indus cities used to import deodara wood from the Himalayas. Their copper might be mined in Rajputana or Baluchistan, gold in southern India. Stags' horn was brought from Kashmir, amazonite thence or from the Nilgiri Hills. Semi-precious materials—jadeite, lapis lazuli and rare turquoises—were fetched from even remoter regions: Central Asia, Afghanistan and perhaps Iran.

Such extensive trade in essential commodities as well as luxuries explains well enough the wealth of the merchant class deduced from the prominence of their godowns in the ruined cities. A reflex of it may be recognized in sherds of Indus vases and other distinctive manufactures collected by Sir Aurel Stein from the ruins of illiterate barbarians' villages and townships in Baluchistan and Waziristan. In any case his finds show how elements of higher culture from the valley were radiated over a backward hinterland.



*Government of India by permission of Arthur Probsthaan*



*Government of India by permission of Arthur Probsthaan*

*Almost the only surviving example of Indus script are short inscriptions engraved on seals, which were presumably used as amulets. Note the ritual manger with the bull on the left*

But the most startling feature of prehistoric Indian trade is that manufactured goods, made in India, were exported to Mesopotamia. In one city alone, Ur, no fewer than thirty 'seals', carved and glazed in the peculiar Indus style, have been collected by Sir Leonard Woolley. At Eshunna near Baghdad typically Indian shell inlays, and even pottery, probably of Indus manufacture, have been found as well as seals. These small durable articles must, of course, be regarded as indices of more extensive exportation of perishable materials (still doubtless mainly 'luxuries') such as textiles, textiles are known from literary sources to have been imported into Babylonia from India in the time of Nebuchadnezzar, some 2000 years later. So already in the third millennium B.C. we must imagine caravans crossing the mountains and deserts of Iran and argosies traversing the Arabian Sea from Peninsular ports to the Euphrates cities, sank-shell found in relatively considerable quantities in Sumerian ruins was presumably brought by the maritime route.

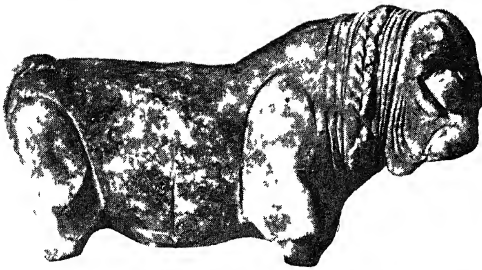
A natural corollary is that the Indian merchants must have had agencies in Mesopotamia, and caravanserais where expeditions could recuperate and re-stock for the return trip. Evidence for this comes, appropriately

enough, from Eshunna, a city located where one route across the Iranian plateau debouches into the Tigris valley. A Sumerian sculptor there has depicted on a vase a scene of Indus cult familiar from many seals from Harappa and Mohenjo-daro. So the Indus merchants and transport men in far Mesopotamia enjoyed on alien soil the comforts of their native worship, just as British merchants in Istanbul or Porto can attend an Anglican service every Sunday.

On the analogy of the Sumerian script it might be guessed that the Indus script had been invented to meet the merchants' need of accurate accountancy. But as they did not write their accounts on imperishable clay tablets like the Sumerians, the proof is wanting. Almost the only surviving examples of their writing are short inscriptions engraved on seals.

The seals themselves, rectangular tablets of glazed steatite, beautifully engraved with animals' figures or religious scenes, might, one would think, have been devised to meet commercial needs, as in Mesopotamia. Unfortunately there is not a scrap of evidence that the seals were ever used to seal anything. Whereas in Mesopotamia, Egypt and Crete sealings (lumps of clay bearing seal impressions) are commoner than seals, none has





*Government of India by permission of Arthur Probsthan*

*Model in pottery, discovered in the Indus Valley, and—*

been found in the Indus ruins Presumably the so-called seals were primarily amulets

Standards of weight were, however, essential and had been established since weights are found in the Indus cities Their standards differ from those generally current in Mesopotamia or Egypt But several weights from Susa on the eastern border of the Tigris-Euphrates delta conform to the Indus standard, affording fresh proof of the ramifications of Indian foreign trade and of its importance

On the remoter origins of the civilization just described we could only speculate Some slightly more definite hints as to its subsequent fate are available In the latest reconstructions of Mohenjo-daro, after the second flood, a progressive decline in architecture is painfully manifest The topmost walls are built of bricks quarried from the older structures and badly laid Spacious houses have been divided up to form smaller 'slummy' tenements It looks as if population was huddled together on the summits of the highest mounds The relics, though apparently of the same kind as those found lower down, produce the same general impression of impoverishment

Moreover the old town planning was relaxed, dwellings encroach upon the streets Smoky industrial furnaces were built in the former residential quarter The skeletons already mentioned show that the civic government was no longer able to protect the lives of citizens Impoverishment goes hand in hand with decay of government

Fragments of a later chapter can be read at other sites In the upper layers at Chahūh-daro and Jhukar in Sind, and in graves dug into the older ruins at Harappa, relics of new type appear The pottery carries on the old

technical traditions, but the designs and forms are new Jewellery and even metal is rare Above all, there are no more inscribed objects, no further written documents And the large rectangular seals with animal designs are replaced at Chahūh-daro by small button seals carved with geometric patterns These are really like some dug up at Tepe Hissar near Damghan in northern Iran, and the new ceramic art has also north-western affinities

Thereafter the archaeological record breaks off completely for nearly two thousand years Some time in the interval the hymns of the Rīg-veda, the oldest of the Hindu sacred books, describe Aryan-speaking tribes in the Punjab, still culturally in the Bronze Age The hymns make no mention of writing and do not seem to describe an urban civilization like that discussed above

The later Vedic and the earliest Buddhist literatures, still handed on exclusively by oral tradition, contain precious data on the growth of Indian religions and give occasional glimpses of social and economic conditions They provide a reliable history neither of the survival or collapse of the prehistoric civilization nor yet of the growth of a new urban economy and polity For an account of that we must await the conquests of Darius and Alexander and the subsequent creation of the Maurya Empire under the Buddhist king, Asoka Then, at length, contemporary native written records begin At first sight it looks as if a complete hiatus, fifteen centuries of illiterate barbarism, separated the age of Harappa from Buddhist India

Closer inspection discloses that, if the literary tradition was interrupted, much culture came through the dark centuries from the brilliant prehistoric past The arts and crafts, furniture and dress, rites and popular cults of modern India illustrate so well the prehistoric remains that no one can doubt they are directly descended from those of the 'forgotten' Bronze Age

For example, the village potters of Sind today use the same peculiar technique and tools as those of Mohenjo-daro though the

*—a small animal in faience Clay, copper and gold were also used for cultural expression in Early Indus Civilization*



forms and decoration of their vases are quite different Bronze Age fashions of dress and ornament favoured a multiplication of bangles of gold, copper, faience or clay, the wearing of nose studs but not of pins, just as contem-

porary Indian fashions do Modern couches and carts accurately reproduce Bronze Age models And so on

Religious symbolism is even more instructive The three-faced god, Siva, with attendant beasts, reappears in another avatar

*Bronze Age fashions of dress and ornament favoured a multiplication of bangles of gold, copper, faience or clay, and the wearing of nose studs — just as contemporary fashions do*



*Paul Popper*

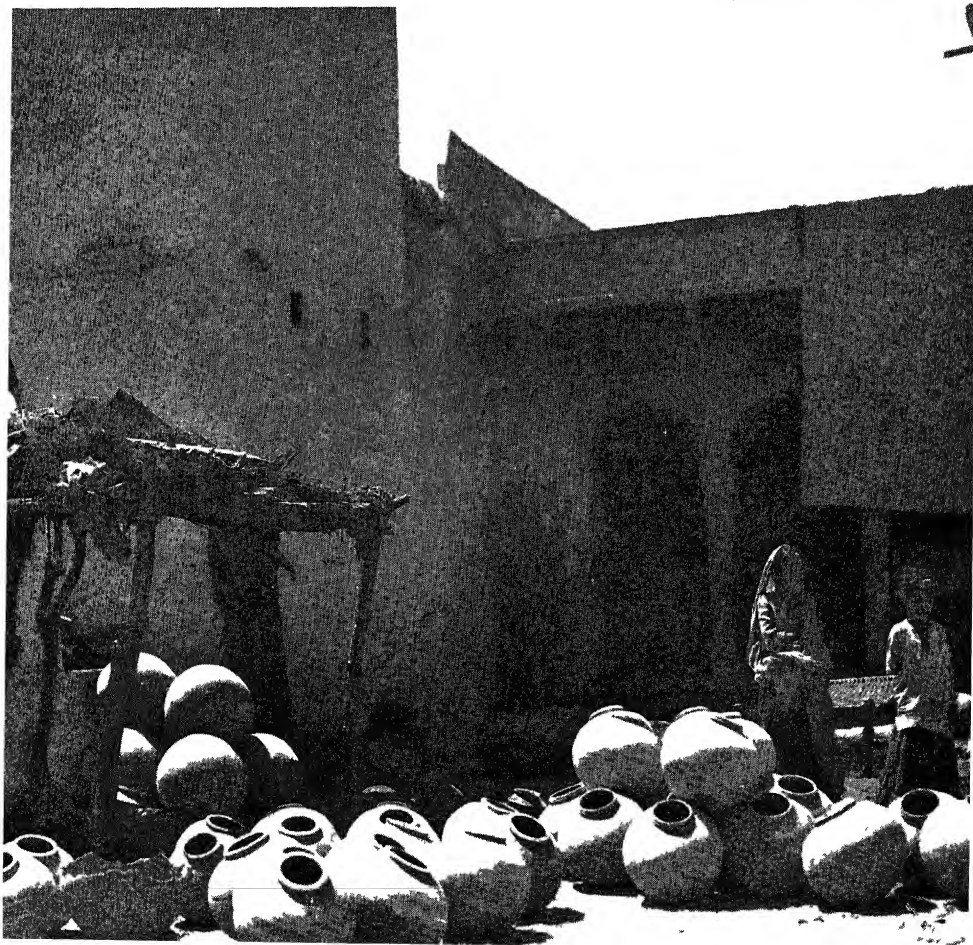
carved on seal-amulets from Indus cities. The modern sexual cult symbols of linga and yoni afford the best explanation of large stone objects found in the ruins. Popular tree and river cults provide texts to interpret scenes on other seals. Modern Hinduism has surely inherited such deities and cults directly from the Bronze Age. But none of them is mentioned in its oldest sacred book, they begin to emerge in later compilations and commentaries and still more clearly with the 'post-Buddhist' Brahmanic revival. Hence these figures are

pre-Aryan, they have been gradually and even reluctantly adopted by conquerors from the older inhabitants of the land.

So, though the names of the Indus cities' builders be unknown, their works still live. The technical tradition and material equipment devised in the prehistoric past, together with its religious cement, shows through all subsequent accretions. In this sense at least the Bronze Age civilization has never been forgotten. All the recent excavations have done is to reveal the millennial antiquity of the Indian present.

*Though village potters of Sind today use the same technique and tools—see illustration on page 175—as their forefathers in the Bronze Age, the form and decorations of their pottery are quite different.*

*High Commissioner for India*



# The Salmon Harvest of British Columbia

by L A ELLIOTT

IN August 1941 I went up the Fraser River Canyon, 130 miles east of Vancouver, to see the salmon run at Hell's Gate, a narrow gorge through which the Fraser surges in a tempestuous flood of glacial clay coloured water. That year was the greatest run of salmon since 1913, when Hell's Gate was partially choked by rock, blasted for railway construction, which greatly retarded the passage of the salmon. Following two mild winters, with little snow, the Fraser was many feet below its normal level. This exposed many big and jagged rocks in the river-bed, and quickened the flow in the narrow gorge.

Parking our car on the Cariboo Highway, my companions and I descended the precipitous canyon wall by a steep, winding trail. In half an hour we were standing on the perpendicular walls of rock, fifty feet above the torrent.

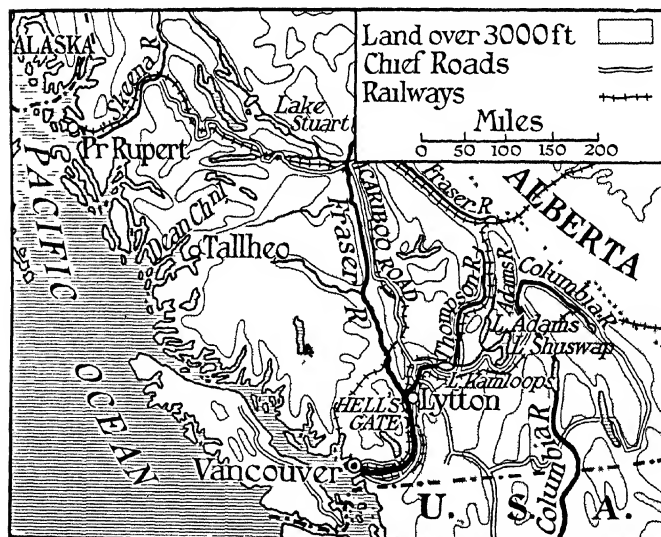
In normal years, the water-worn rocks on which we stood were covered with many feet of water. When there is a freshet the river rises as much as a hundred feet at this point.

Hugging the very edges of the canyon walls, at the waterline, were long, submerged, reddish-purple and silver ribbons, which at first sight resembled trailing bands of seaweed. Then we saw that the solid mass was composed of thousands of salmon, taking advantage of every sheltered nook and eddy. On the fringe of this mass, in single file, were individual fish, stronger than the rest, and moving forward more quickly.

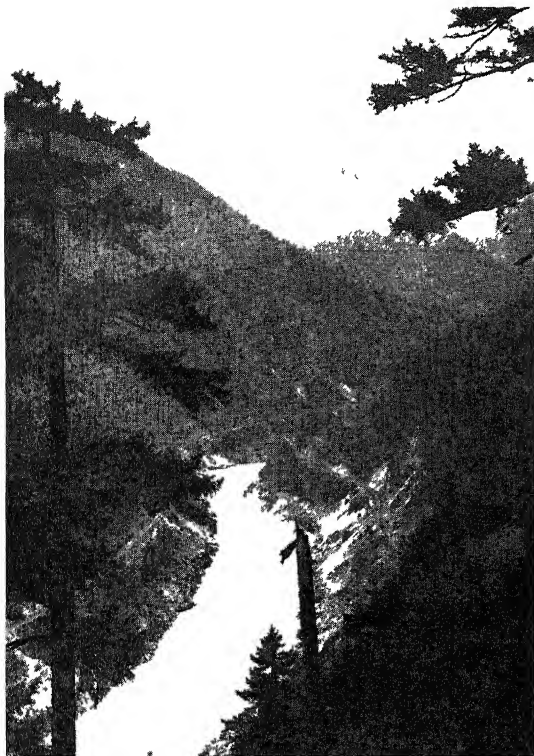
Studying that broad ribbon of salmon, which appeared stationary, we realized it was swimming strongly against a current with a speed of twenty to twenty-five miles an hour. Slowly the fish moved forward, and on reaching the vortex of the narrow gorge, hurled

themselves against that churning mass of water. Single salmon would leap ten feet or more above the spray in an attempt to surmount it, be thrown back into boiling whirlpools, and then drift downstream exhausted. They sought sheltered eddies to rest before making another attempt and few would get through.

Some of them, making a final dash through the gate, were thrown high-and-dry on the shelving rocks, others were stunned by the hard rocks and drifted down the yellow flood, dead or dying. This, we realized, was one of Nature's tragedies, in which many thousands of salmon perished.



Stanford, London



*The Fraser River Canyon, a few miles below Hell's Gate, seen from the Cariboo Highway, the road first constructed by Her Majesty's Royal Engineers during the gold rush of the early '60's. The two great Canadian Railways operate on opposite sides of the river. The Fraser flows through scores of miles of canyon such as this.*

*Hell's Gate, a narrow gorge through which the Fraser River surges in a tempestuous flood of glacial water. It is here that the salmon, fighting their way upstream from the Pacific coast through miles of rapids, meet their greatest obstacle. That some get through it is proved by the fact that many are found in remote lakes and streams 500 miles inland.*

*Photographs by the author*





*Entering Dean Channel on board a steamer The great raw mineral-bearing land is seen in the distance These waters are honeycombed with salmon nets, at night they are marked by lighted lanterns to guide the sea-borne traffic*

Day after day, week after week, that seemingly endless horde of salmon had been fighting its way through miles of rapids until it reached Hell's Gate, the greatest obstacle, at this point about a hundred feet wide, with an average depth of water of 250 feet. The flow of two mighty rivers, the Fraser and the Thompson, are concentrated into a narrow gorge. The rapidity of the flow is comparable to that of a waterfall. The wonder is that any of the salmon get through that narrow gut, after the exhausting trip through miles of rapids. That they did get through is proved by the fact many were found in remote lakes and streams 500 miles inland.

They go up river, hundreds of miles, fighting the rapid flow without food or rest. As the spawning season approaches, the throat of the salmon becomes atrophied and shrinks so that it cannot take food, but a reserve of strength and a stout heart carry it on, until it reaches the sandy-gravel beds of the stream where it was hatched. It would die rather than spawn in an alien stream.

When they reach the spawning ground the salmon are exhausted, emaciated, slimy and discoloured. The female, on her side, ploughs a shallow depression in the sandy gravel, using her tail to scoop out a 'nest'. The eggs are laid, and the male fish covers them with fluid. Thousands of eggs are laid at a time, and more than one nest may be made. As each is completed, the two salmon cover the eggs with fine gravel, and in three weeks or a few months, according to the species and the water-temperature, the young fry are hatched. Some migrate to the sea as soon as they are able to swim well enough. But the Sockeye fry spends about a year in the lakes and streams before going to sea.

"What of the old salmon?" you ask. They die, not so much from the spawning as from exhaustion and atrophied digestive systems. A few days after spawning they drift downstream, dead. That's the only time an adult salmon will go downstream, while there's a spark of life it will swim against the current.

There are five species of Pacific Coast salmon, each with more than one name. The Chinook, King, Spring or Tyee salmon is the largest, running from twenty to a hundred pounds in weight, its flesh varies from deep red to pink.

The Sockeye, Blueback or Alaska Red salmon runs from five to twelve pounds in weight and has the finest flesh for canning. The British Columbia pack is usually labelled "Fancy Red Sockeye Salmon".

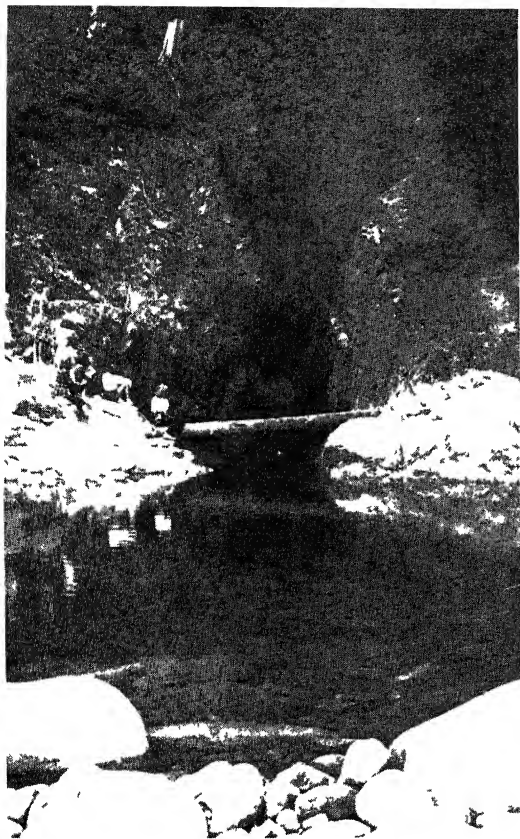
The Coho, Silver or Medium Red salmon runs from six to thirty pounds, on account of its paler flesh it is not canned to any great extent. It is especially good for curing, smoking or salting.

The Chum, or Keta salmon, is in the same class as the Coho for curing, and averages seven to sixteen pounds in weight.

The Pink, or Humpback, only averages about four pounds, when canned it is labelled 'Pink Salmon'. When on the spawning grounds the male fish develops a hump on its back, hence 'humpback'. This species returns from sea at two years of age, and is plentiful along the British Columbia shores.

The Steelhead trout is a splendid game fish, and scales from eight to twenty-five pounds. Its flesh is red and of excellent quality. On account of its resemblance to salmon, the layman usually calls it salmon trout. This





(Above) A sheltered salmon pool in a mountain stream, where children sit and watch the salmon spawning—a common sight in the summer and early autumn. (Below) On the Thompson River a view of the miles of rapids through which the Shuswap and Adams Lake shoals of salmon must fight their way. On opposite sides of the river are seen the Canadian National and the Canadian Pacific Railway tracks.



species is found in coastal streams from Alaska to California

Salmon consort only with their own kind, and in their own creeks. One creek will have nothing but Sockeyes, and it will be a long way inland. The Pink, or Humpback salmon, will spawn within a few miles of the sea. The big King, or Tyee salmon, will travel a thousand miles upstream before spawning.

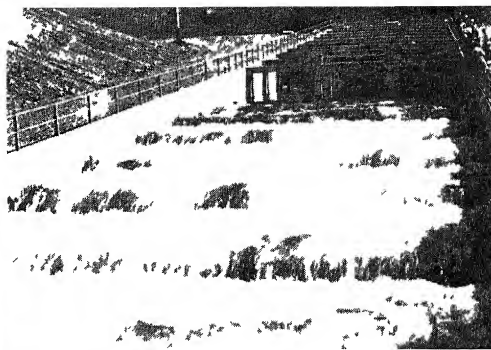
Sockeye salmon enter the Fraser River in shoals, a few days apart. When they reach the confluence at Lytton, some shoals will keep to the left and follow the tawny-coloured waters of the Fraser, spreading over a great network of lakes, as far north as Stuart Lake, 600 miles further inland. Later shoals will turn to the right at Lytton, following the clear waters of the Thompson River, through Kamloops Lake, Adams River, and the extensive Shuswap and Adams Lake chain.

When the young fry become fingerlings, in the lakes and creeks, members of the Salmon Commission catch many of them and clip out a small piece of fin, this heals, but never grows again. A different clipping is used each year, and for each stream. When the salmon returns it is easily identified. Mature fish entering the rivers are also caught and tagged, this gives a positive check on their general movements. The age of a salmon can be ascertained by the rings which form on the scales, as with trees, a new ring grows for each year of the salmon's life.

In September last year I again went to Hell's Gate. Engineers of the Pacific Sockeye Salmon Commission have made an attempt to help the battling salmon pass through the Gate. Pending the construction of proposed fish ladders, a number of rocky obstacles have been blasted away. A suspension footbridge has been thrown across the Gate, and a donkey engine, operating a derrick and brailer (circular net about twelve feet deep, with a steel rim six feet in diameter) has been installed.

This huge brailer is operated by a winch. The equipment stands on a projecting ledge, which forms one side of the narrow gut. The net is dropped into the slack eddies just behind the rock and scoops up the salmon from the water. The fish are dumped into the lower of a pair of huge wooden tanks. A flood of water, released from the upper tank, forces the fish into a flume, along which they travel a distance of 250 yards upstream, into quieter water. The upper tank is kept filled with water by a force pump and an upper wooden flume.

Two great salmon rivers empty into the



(Left) View of the Columbia River about 150 miles from the Pacific Along this river, at various places, Indians may often be seen fishing with primitive fish traps and spears They may catch and dry all the salmon they need for their winter's food supply, and take fresh salmon at any time for their own use (Right) A Fish Ladder at Bonneville Dam on the Columbia River Scores of visitors watch the fish ascend the ladder, and pass through the counting gates

Pacific from British Columbia the Skeena, in Northern B.C., meets the salt water near Prince Rupert, in sight of the Alaska Panhandle The Fraser River forms a delta near Vancouver

In Pacific waters, the salmon are caught in gillnets, purse seines and fish traps Practically all salmon are caught near the river's mouth and are then in excellent condition for canning

The Columbia River, another big salmon river, flows 450 miles in British Columbia before crossing into the United States, it continues another 750 miles to empty its waters into the sea near Astoria, Oregon, about 400 miles south of the Fraser River Many other rivers, from Alaska to Southern California, yield large catches of various kinds of salmon

Recently I paid a visit to a number of canneries on the Fjords of Northern British Columbia and on the Skeena River The first cannery we visited was at Tallheo, in the Dean Channel

Over 200 Indian girls were employed there, also a few Japanese girls and Chinese boys Whites, Indian and Japanese men did the fishing They go out in small gas-boats or dories in which they live and fish for five days at a time The fish are collected every morning by tug-boats from the canneries

It was interesting to watch the salmon as they came up a conveyor from the collecting tug They were segregated into the different varieties, and placed in large bins

The Sockeye, averaging ten pounds apiece, were fed into a machine called the 'iron chink', which cut off heads, tails and fins, slit the salmon open and removed the 'innards' Indian girls then inspected the fish and cleaned out whatever remained,

Chinese boys next fed the fish, tail first, into another machine, where circular steel knives divided it into slices to fit the cans

Tall cans were filled by machine, flat ones by hand Everyone handling the fish wore white cotton gloves and white rubber overalls Travelling conveyors carried the fish, and later the cans, from one operation to the next As they passed a certain point they were weighed and if under weight another piece of fish was added

In earlier days, we were told, the cans were laboriously made by hand at the cannery Now they are made in factories at the rate of 300 a minute, and shipped to the canneries flat At the cannery a machine rounds out the cans and puts on the bottoms very rapidly The vacuumizing and sealing machine puts on the lids and seals them down Chinese helpers then packed the cans in stout iron trays, stacked them in steel retorts in which the fish were cooked, at fifteen pounds steam pressure for two and a third hours

After cooking, the cans were put on an endless conveyor, passed through a bath of lacquer, dried in a current of warm air, and immediately packed in cases for shipment The labels are put on in Vancouver

The Columbia River has dams constructed at three points for the purpose of generating power The fishing interests on the Columbia River, who reaped \$20,000,000 a year revenue from salmon, raised great objections to them To facilitate the passage of the salmon, the Rock Island and the Bonneville dams are provided with fish ladders, a series of large concrete steps The water continuously pours down them, and the lusty salmon find travelling easy Half-way up the ladder, a series of steel racks cross the fishway, these can

be closed for the night. Every fish going upstream passes through a narrow gap, and is counted and classified by men stationed there for the purpose. The day's count is recorded on a notice-board for the public to see.

The fishing interests claim that millions of the fish will never find the ladders, and that the fingerlings, who are just as determined to go downstream as the adult fish are to go upstream, will get into irrigation ditches and perish, or pass through the turbines. The ladders have not yet been in operation long enough to decide these questions.

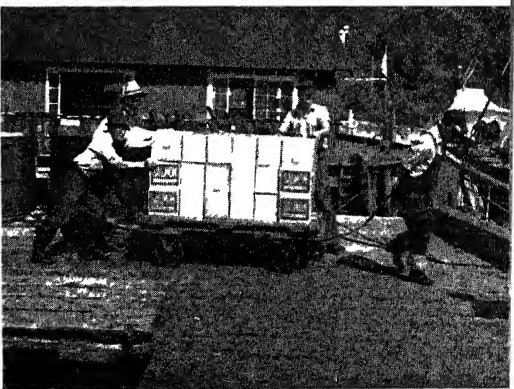
The Fisheries Commission, long ago, found it necessary to restrict the catches made at the river's mouth, and fishermen are compelled by law to lift their nets on certain days each week, to ensure passage of sufficient salmon to replenish the streams.

Gradually decreasing runs brought about the development of fish hatcheries in British Columbia and neighbouring States. The salmon are trapped on their way upstream, and the eggs taken from them. The hatchery is usually a long, one-storey building with troughs arranged in parallel rows. A gentle stream of water runs through each trough and over the eggs, which rest on fine sand at the bottom.

It is interesting to watch the little creatures as they come to life. First to appear is the eye, then the backbone. In a few weeks each gelatinous egg changes into a tiny fish, which wiggles merrily at the bottom of the tank, and soon learns to swim around and hunt for food.

For the first few days the fry have a yolk-sac attached, this supplies food until they are able to fend for themselves. The little fish are later permitted to leave the incubator and enter outdoor pools, in which they live until ready for release into the river. In this way millions of young salmon are propagated every year.

The Canadian Fishing Company, which operates thirty-three cannery plants along 2200 miles of British Columbia coastline, handles a hundred million pounds of fish a year. They turn out nearly a million cases of canned salmon, and twenty-five million pounds of fresh and frozen fish, smoked and cured fish, fish livers and caviar every year. Salmon oil, which is particularly rich in vitamin D, the sunshine vitamin, is extracted from salmon liver. It is valuable for the treatment of rickets in children. Other grades of oil are extracted for the manufacture of soap and paint. Nothing is wasted, fish offal is turned into fish meal for cattle and poultry, and the residue becomes fertilizer.



(Top) Salmon Cannery in Northern British Columbia. (Middle) Sockeye salmon in the bins at a cannery on the Skeena River. (Bottom) Shipping the last truckload of 6000 cases of salmon from a Skeena River cannery. Chinese workmen load and handle the trucks at almost all the canneries in British Columbia.

# The Future of Cambridge

by L DUDLEY STAMP, D Sc

*In this article Dr Stamp, by taking the specific example of Cambridge, attempts to illustrate some of the problems which must be faced in the National Planning of Town and Country to which the Government are now committed. He gives no answer to the questions he raises: they are intended to provoke constructive thought.*

UNDER the Act of Parliament passed early in the present year setting up a separate Ministry of Town and Country Planning, the Minister is charged with the duty of "securing consistency and continuity in the framing and execution of a national policy with respect to the use and development of land throughout England and Wales."

This practical step is in fulfilment of promises previously made by the Government in both Houses of Parliament and marks an extremely important change from local town

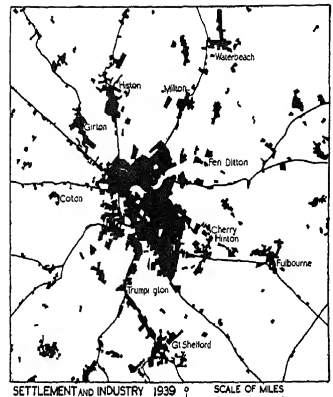
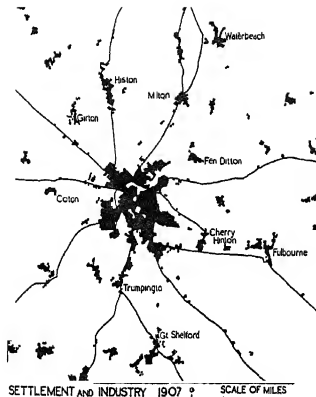
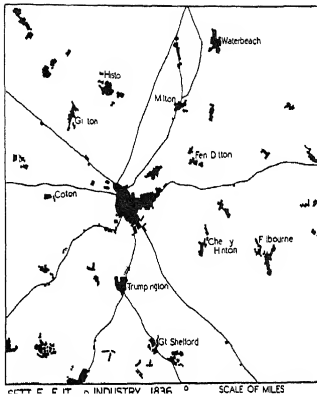
planning to town and country planning coordinated nationally.

There are in England some fine examples of early town planning—in the Roman settlements, in some of the Norman strongholds, as well as in such cities and towns of later eras as Bath and Brighton—but the attempt to regulate the sprawling development consequent upon the industrial and domestic expansion of Victorian times is only quite recent. The first legislative measure empowering local government authorities to undertake plan-

*Cambridge, looking eastwards from the tower of the University Library. In the foreground are the new buildings of Clare College; beyond, from left to right, are Clare College and the tower of the University Church, King's College Chapel and King's College.*

British Council





Three maps showing the rapid growth of Cambridge from 1836 to 1939. All the land shown in black is non-agricultural: industrial buildings, houses and private gardens.

ning, in that case limited to suburban expansion, was the Housing and Town Planning Act of 1909. Its scope was widened in 1919, in 1923 and in 1925, but the important Act, still in operation, is the Town and Country Planning Act of 1932.

Under this Act the initiative for undertaking a town planning scheme rested with the local authority. After the passing of the necessary resolution to prepare a scheme, there followed an 'interim period' during which the scheme was prepared, submitted for approval to the Minister of Health (who held local enquiries to hear objections), amended and finally approved. By the end of 1941 there were 'operative schemes' (i.e. finally approved) covering only 1,056,000 acres out of the total area of 37,339,000 acres in England and Wales, but schemes deposited with the Minister for final approval covered a further 4,356,300 acres and schemes were in preparation covering another 21,500,000 acres.

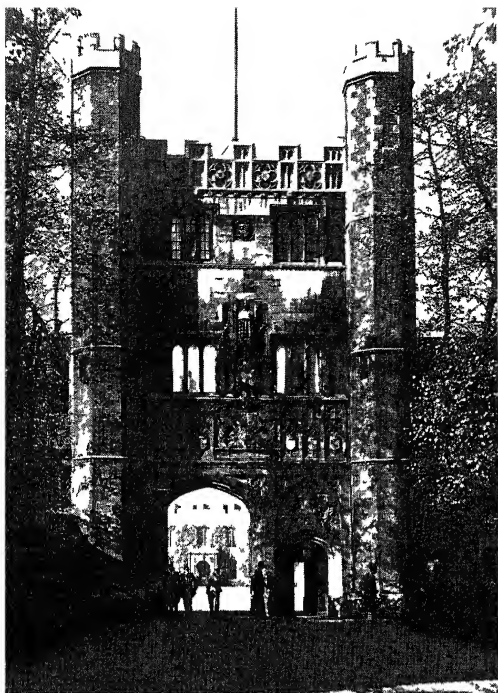
Already this local planning had shown itself inadequate in many ways. The central government had no power to initiate schemes, no power to compel local authorities either to undertake schemes, or if they undertook them to secure adequate cooperation with neighbouring authorities. The bulk of the schemes are doomed never to come to fruition because they proceed on the assumption of continued expansion in area and population with the result that even the limited number of schemes in an advanced stage of preparation by 1937—a time of almost stationary population—had zoned enough land to accommodate a population of nearly 300 millions in addition to the present total of 41 millions! The planning

was essentially town planning, no protection was afforded to open or agricultural land except in so far as it was desirable for amenity purposes, and even then the ever-present fear of having to pay compensation for any restriction of use prevented adequate provision being made.

Of the need for coordinating local planning schemes into a single consistent national policy there can thus be no doubt, but the practical problems are enormous. To secure a satisfactory marriage between central guidance and local initiative presents all the problems of any human marriage between two very different partners, each equally indispensable to the union. There must be no "dictation by Whitehall", but there must be no "refusal to play" by the local authorities. There are those who firmly believe in continued celibacy and isolation, who regard unplanned *laissez faire* development as the natural course or, in any case, hold that the local inhabitants know what is needed for their own locality and that no outside interference is to be tolerated.

Cambridge affords a particularly interesting example for study because it is possible to trace the 'natural' development and to see the conflict of local opinions engendered both by this uncontrolled development and also by attempts at local planning. At the same time Cambridge is a unique national—one might say international—heritage, whose future is definitely the concern of others besides the local inhabitants.

The three maps above, all on the same scale, show the areas covered by buildings in 1836, at the time of the first Ordnance Survey one-



Herbert Fellon



I. D. Stamp

#### TRADITIONAL CAMBRIDGE

(Left) The Great Gateway of Trinity College (1518-35) (Above) The Gateway of Newnham College (1893) (Below) Dining in Hall at King's College College life still preserves much of the medieval monastic tradition. Most of the dons are married and have their own homes but they lunch or dine at least periodically at the High Table



Hulton



inch maps, in 1907 before the first World War, and in 1939 after the great spate of building between the wars. These maps illustrate the physical effects of the population increases shown by the following figures

Date	Population of England and Wales	Population of Cambridge	University
1801	8,892,536	10,087	811
1811	10,164,256	11,108	814
1841	15,914,148	24,453	660 <sup>1</sup>
1901	32,527,843	50,453	3,642 <sup>2</sup>
1911	36,070,492	55,812	4,470 <sup>3</sup>
1921	37,886,999	59,264	5,929 <sup>3</sup>
1931	39,952,377	66,789	6,404 <sup>4</sup>

<sup>1</sup> Students living in college only

<sup>2</sup> In addition 330 in the women's colleges

<sup>3</sup> Excluding women

<sup>4</sup> In addition 603 women

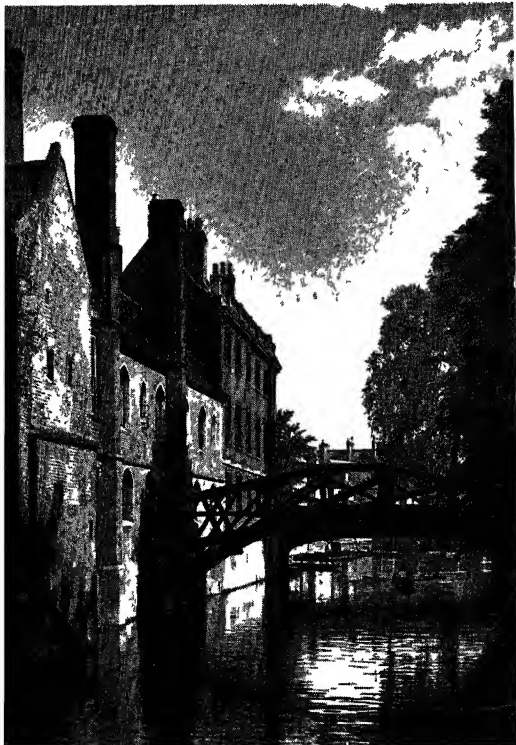
#### THE UNIVERSITY

The above table illustrates the remarkable growth in the number of resident members of the University, especially noteworthy in the

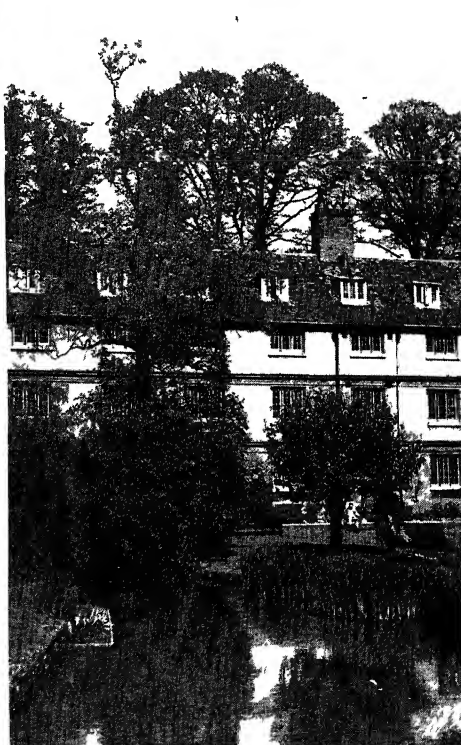
period between the wars. It was 4436 in 1913-14, it naturally leapt in 1920-21 (to 5974) because of the many students demobilized from the forces whose University education had been postponed. Apart from the large number of new professorships created at the same time, Cambridge has many reminders of the great expansion of 1921-39. The new University Library, designed by Sir Giles Gilbert Scott and completed at a cost of £500,000 mainly through the munificence of the Rockefeller Foundation which gave £250,000 to the University, was finished in 1934. The new buildings of Clare College (1924, also designed by Scott), the additions to King's (1928), Jesus (1930), Downing (1931), Caius (1935), Queens' (1936), Peterhouse (1939) and St John's (1939), as well as the many 'schools' on the Downing Site, are but a few examples of University buildings of the 1921-39 period. As the illustrations show, architectural ideas are most varied and opinions differ widely as to the merits of the individual buildings. It is to be noted that the expansion of the University took place

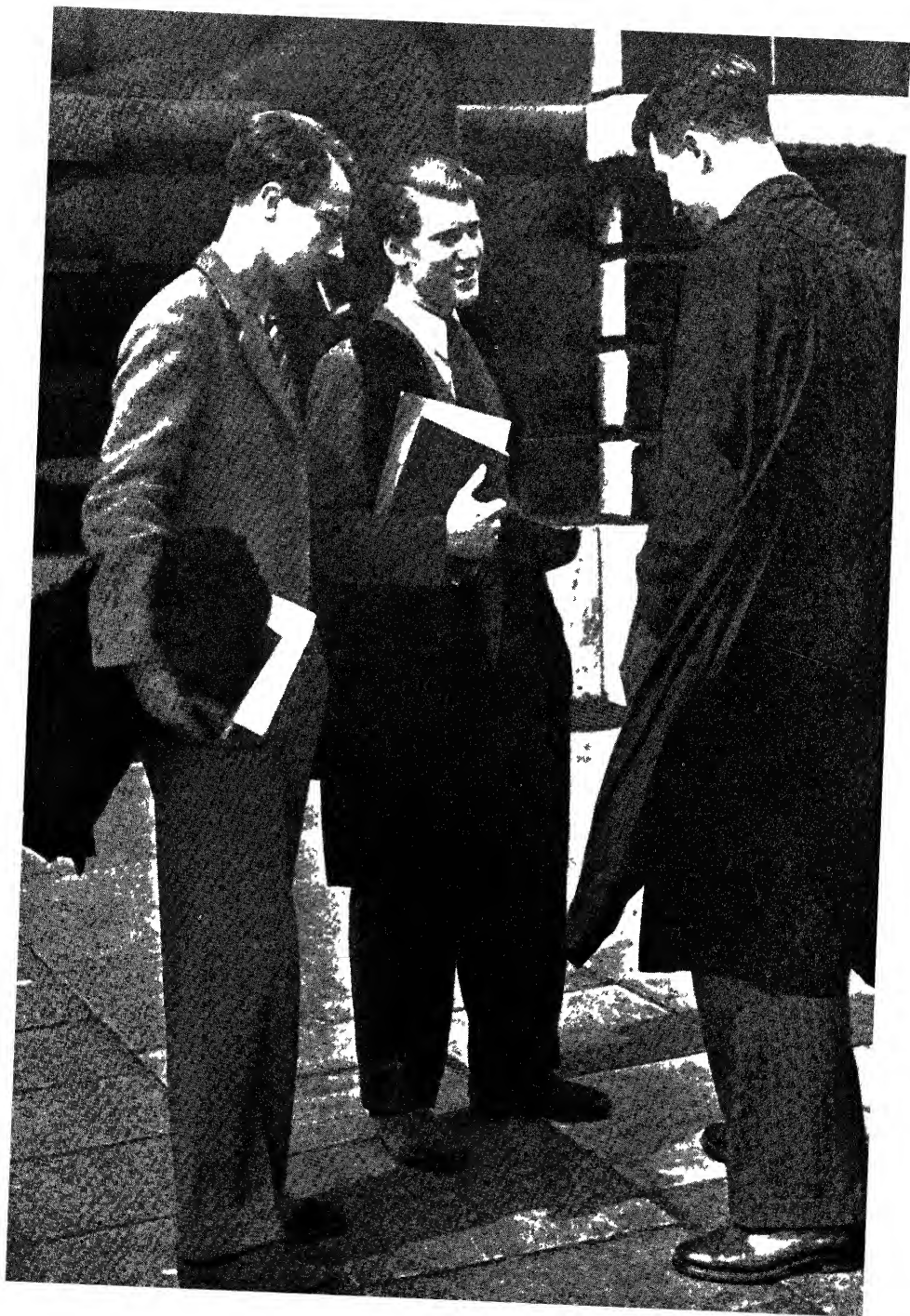
(Left) *The Cam with Queens' College on the left* (Right) *The garden of Emmanuel*. Most of the Colleges have attractive, secluded gardens, some open to members of the College, others reserved for Fellows or the Master.

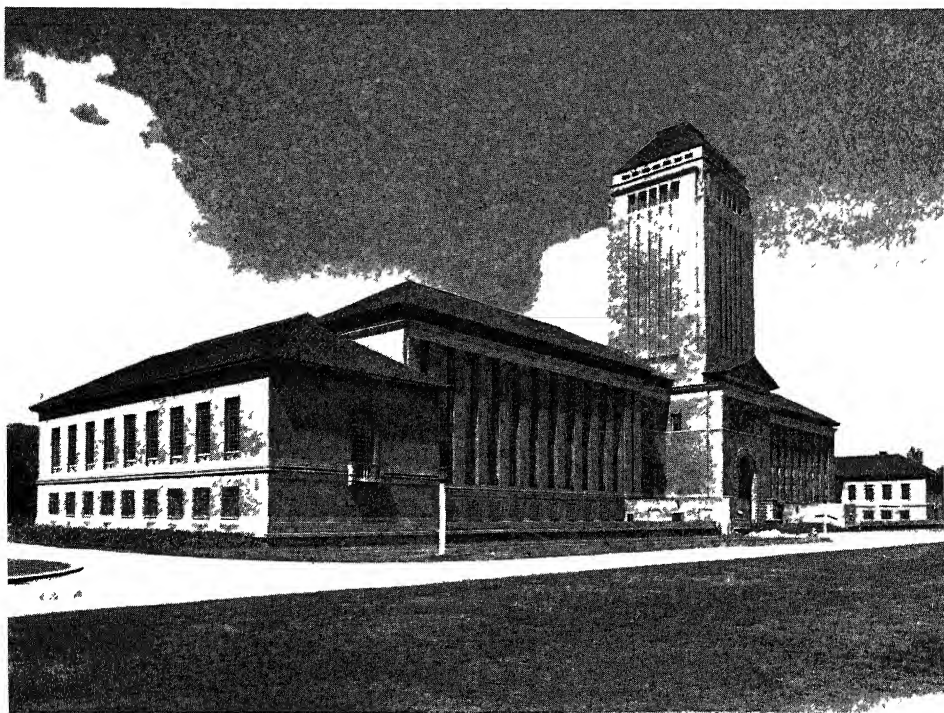
Herbert Fellon



Ramsay & Muspratt







British Council

(Opposite) *Members of the University* The undergraduate's gown is a uniform which marks him as a member of the University and under its discipline War-time shortage of materials has led to the 'square' or mortar-board being dropped for the moment (Above) The new University Library Architect Sir Giles Gilbert Scott

without any increase in the number of colleges Of the twenty Cambridge Colleges all but four date from before the 17th century The later ones are the two women's colleges, Newnham (1871) and Girton (1872), Downing (1801) and Selwyn (1882)

#### THE TOWN

Concurrently with the growth of the University has been the growth of the town In 1801 members of the University represented one per 11,000 of the population of England and Wales, by 1921 this had increased despite the many new provincial Universities to one per 6000 In 1801 the University represented about 8 per cent of the population of Cambridge, compared with about 10 per cent in 1931 Thus while the *relative* importance of town and University—of town and gown—may not have changed so markedly, Cambridge has grown from what was essentially a campus with a pleasant little market town attached to a town of 75,000 inhabitants with

many interests and activities apart from the University

#### TOWN AND GOWN

As a Municipal Borough of 75,000 people Cambridge is a town of no mean importance This is symbolized by the fine new Guildhall, begun in 1937, which dominates the old market square of Market Hill In that square with its bookstalls thronged by savants and students cheek by jowl with the greengrocers' stalls used by both the students' 'landladies' and the bulk of the Cambridge housewives, the 'town' has become dominant The shops and cinema on the east, of Victorian-Edwardian date, and the modern block with shops (which is actually the new building of Caus) on the north seem foreign to the University whose own church flanks the square on the west But just as the University resented the intrusion of its peace and seclusion by the coming of the railway in the 'forties, and insisted on the station being a mile and a half



*The new Clare College buildings, also designed by Sir Giles Gilbert Scott*

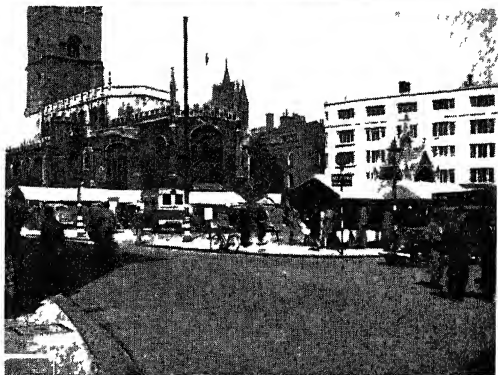
to the south-east, so the non-University growth of Cambridge has been markedly localized. Broadly speaking the colleges lie along the east bank of the river Cam: only one (Magdalene) of the older colleges and part of St John's were built to the west of it. Newnham, Selwyn, Westminster, and further afield Girton, the University Farm and National Institute of Agricultural Botany sought the west, and the University of recent years has persistently faced westwards and turned its back on the east. The new Library and the new buildings of Clare and Queens' are all to the west of the river and in the vicinity of the Library has grown up a select residential quarter essentially 'university'. Through the Cambridge Preservation Society a large belt of land was purchased to be kept as open farm land on this side of Cambridge, to protect the amenities. There has been similar interest southwards—up river to Grantchester and in certain crucial areas such as the Gogs and Madingley Hill—but what has happened to the east and north of Cambridge is another matter. There are roads of solid, slightly pretentious but now shabby-genteel Victorian

houses and, near by, mean streets of almost slums. Much more extensive are the large housing estates developed, as map 3 shows, almost entirely in the 1921-39 period. Architecturally much of the building is atrocious—a whole street for example of double-storied semi-detached council houses built of asbestos or steel sheets, on a steel or wooden framework—and from the point of view of planning the approach to Cambridge (for example from Sawston through Trumpington) has been ruined by some of the worst examples of ribbon development to be found anywhere in England. Apart from the dirty cement industry various light industries have developed: there was little or no unemployment.

So much has already happened: what of the future?

#### THE FUTURE

Probably the views held about the future of Cambridge are as diverse as are to be found in any town in the country. Broadly speaking the older University dons dislike change: they desire facilities for their work and that



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### UNIVERSITY BUILDING 1921-1939

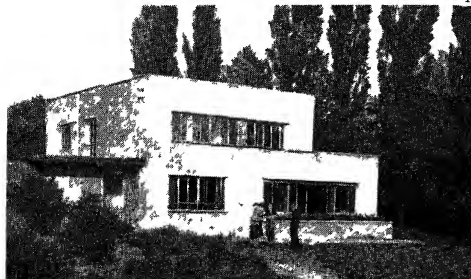
(Upper, left) The new Queens' College buildings, completed in 1936, are the most disputed in Cambridge (Upper, right) Fencourt Peterhouse, completed in 1939, the new wing with its modern lines hides behind the old Peterhouse wall and overlooks the 'Fens' Notice incongruous Victorian houses on the left (Lower, left) The new King's College buildings, completed in 1928, built to match earlier buildings (Lower, right) The new Caius College buildings, completed in 1935 A new departure from tradition is shown in the shops at street level The University Church, Great St Mary's, is on the left (Below) Pair of modern houses in the University residential quarter Both distinctive in their own way, they unfortunately stand side by side

essential atmosphere of calm and seclusion in which the cultural life of the nation is best fostered There is a marked tendency to dislike 'planning', especially town planning applied to Cambridge, but an equally marked tendency to an ostrich-like attitude which

refuses to recognize the inevitability of change Though the people of Cambridge unconnected with the University may live in suburbs or areas apart, they shop in the centre Already the most prominent sites in the heart of Cambridge are occupied by large branches

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of nation-wide multiple companies which, with several large cinemas, cafés and local stores, draw to them the shopping crowds from the whole. The heart of Cambridge, quite apart from its narrow streets, has become too small for the sprawling physical body it has now to serve—for Market Hill has not increased in size nor have Petty Cury and Trinity Street become any wider.

Much land in and around Cambridge is owned by the Colleges and there is not infrequently a conflict of views within the University itself. It is the obvious duty of the Bursars, for example, to watch the College profit-and-loss account and its balance sheet. However desirable it may be from the amenity angle to discourage further building there is an obvious temptation, seeing that more building is bound to take place anyhow, for the Colleges to sell or develop some of their land 'ripe for development'. Consequently when the planning scheme for Cambridge was under consideration, most of the Colleges insisted on securing their *right* to future profits of this sort by insisting that most of their playing fields and open land should be zoned for housing. The purchase of land by the Preservation Society for retention as open land has in fact shifted not a little of the 'floating value' onto the property of the Colleges and rendered the temptation greater. Thus in a way the University is its own worst enemy.

Where a town depends on a single industry there is clearly a danger should depression or evil times hit that industry. There is the further fear if a single industry dominate a town that 'big business', as represented by the controllers of that industry, may exercise also an undesirable degree of control over the affairs of local government. Whether University education should be regarded as an 'industry' in this sense is a moot point, but there is undoubtedly a strong body of opinion which resents any semblance of dominance in

#### NON-UNIVERSITY BUILDING 1921-1939

(Top) *The brewers' contribution to new buildings.* (Second) *A possible entry for the ugliest Council houses? Asbestos or steel sheets on a steel or wooden frame, the whole coloured a dull pink. The occupants claim they are cosy and dry.* (Third) *Interesting examples of prefabrication: each side of the house is of reinforced concrete, made on the ground and then hoisted up and joined at the corners.* (Bottom) *The new Guildhall, begun in 1937.*

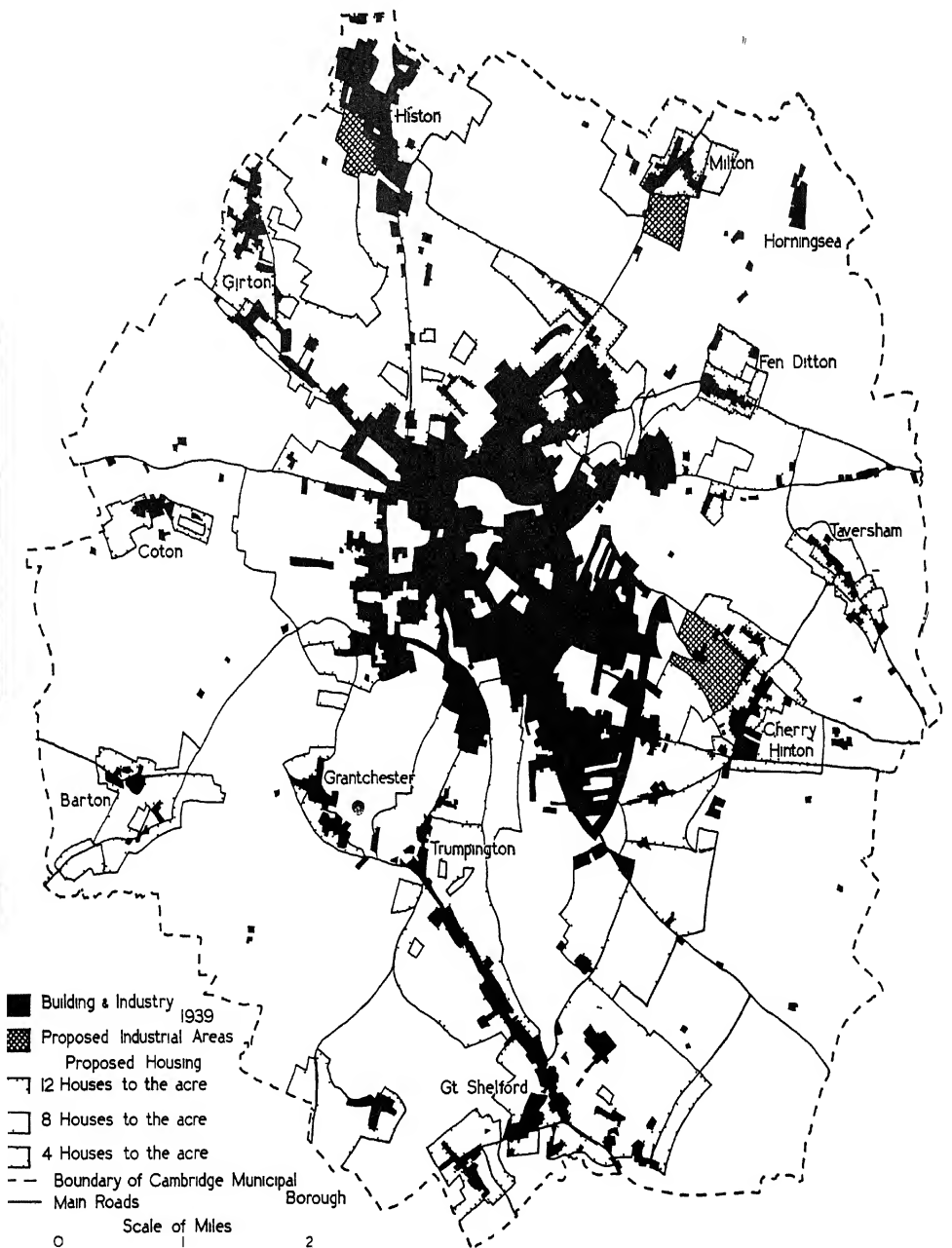




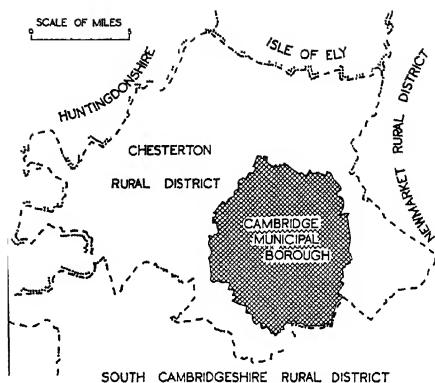
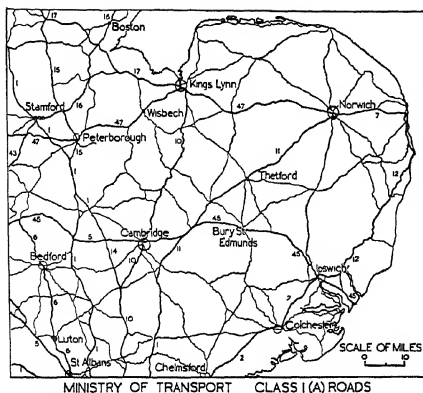
*L. D. Stamp*

(Above) *Via Devana* as it should be and (right) as it is in 1943 This old Roman Road is the main artery of Cambridge Even with the comparative sparseness of traffic in war-time this lower picture speaks for itself Yet many claim that Cambridge does not need a ring road





*The Cambridge of the Future? This map shows the huge area which will be covered by the town if the planning proposals agreed on just before the war come to fruition. Provision is made for about 175,000 people instead of the present 75,000.*



(Left) *Cambridge as a road centre* It lies on the one main route from the industrial midlands to the coast resorts of much of East Anglia as well as on the direct route from London to King's Lynn and Hunstanton Yet University interests still oppose a ring road to by-pass Cambridge (Right) Cambridge is a Municipal Borough, almost entirely surrounded by Chesterton Rural District It is the only important town in the County, yet some consider it ought to be an independent County Borough

local government by the University and which would welcome a diversification of occupation—for example the further development of manufactures It is noteworthy that the planning scheme for the town, which was completed and but for the war would probably have been finally approved, zoned roughly 165 acres for industry and approximately 3400 acres for additional housing, at densities of four to twelve houses per acre, making provision for a further 100,000 people

The suitability of Cambridge as a manufacturing town is heightened by its focal position relative to both rail and road (only one and a half hours from London) and its natural suitability to become the 'regional capital' of the rich agricultural province of East Anglia During the war it has fulfilled the latter function and, although there is considerable opposition to regionalism if it means dominance over local authorities by regional officers appointed rather than elected, the great advantages of having in the heart of an area representatives of the central government departments who at the same time know local problems is such that there is a definite function for a regional capital, a dignity likely to be retained by Cambridge

The story of how a cycle repair shop became a great motor industry and overwhelmed the

city of Oxford is too well known to need emphasis The interest of the University of Cambridge in precision scientific instruments was natural That it led to contact with wireless development is also natural and with such a young and vigorous industry what is more likely than a future expansion as yet undreamed of Cambridge as the centre of the wireless manufacturing world, its thousands of factory workers thronging the narrow lanes where once the undergrad's gown reigned supreme?

What may be the pattern of the Cambridge of the future it is impossible to say it may remain a predominantly university town of limited size, it may develop into a manufacturing town One thing is certain, change is inevitable and the question is should changes be allowed to take place haphazard, should they take place in accordance with a local plan, or should the nation step in and say what it considers is the function of Cambridge in the national life? To decide this crucial problem is the function of National Planning

Cambridge has sons in every walk of life, in every corner of this country and indeed of the world, and they know that Cambridge is a unique heritage Let us first suppose that they make their voice felt and that Parliament makes clear to the Government that it is the nation's wish that Cambridge should (a) re-

main predominantly a centre for education and research and (b) that its growth both in area and population should be limited. How should such a decision be carried out?

The first requirement is full control by the State over the use of land. There are several ways of securing this: one is land nationalization, a second is the vesting in the State of all development rights as proposed by the Uthwatt Report, a third is the purchase by a special corporation of all land involved in the planning area, a fourth is the payment of compensation on an agreed valuation for any restriction in the use of land, *i.e.* when agricultural land is ordered to be kept as such the owner would be compensated for losing his right to develop. Control is the first thing.

But the plan is the second. In such a case it would have to visualize the functions of Cambridge as a national educational centre and the land use which would be involved, a plan with details would have to be agreed with the town, the University, the surrounding local authorities, the county (see map on page 197) and the central planning

authority. It would be different from any planning scheme yet devised because it would strictly limit various forms of growth—it would “zone very tightly.” With such an areal plan there would still be the enormously important work of building and rebuilding local initiative, complete cooperation of all concerned would be essential but it would be clear to all what were the objectives to be reached.

How much interference would this involve with old privileges and rights? Not necessarily any, provided there was loyal acceptance of the righteousness of the national plan and the national objective, but change or adjustment there might have to be, even within the inner councils of the University. Take a specific case. This country has at the moment only one national library, the British Museum, where everything published must be deposited. The Cambridge University Library is one of the Statutory Libraries and is entitled to receive copies of all books published, but it is left to a small committee to decide what shall be placed in the library catalogue, so that the library is in fact very incomplete.



*F. R. Winstone*

To relieve the intolerable congestion in London it might well be decided to encourage research workers, whether connected with the University or not, to use Cambridge as their centre, and a review of Cambridge University Library policy both in relation to its acquisition of books and its facilities for public access might become a matter for urgent national consideration

Physically there are certain outstanding considerations Cambridge streets are narrow, they are flanked by buildings which are priceless Cambridge must in any case be a traffic centre to ease the situation every vehicle which does not need to seek the centre of Cambridge must be diverted A complete ring road is essential, it must be a true park way with absolutely no ribbon development and so designed as to

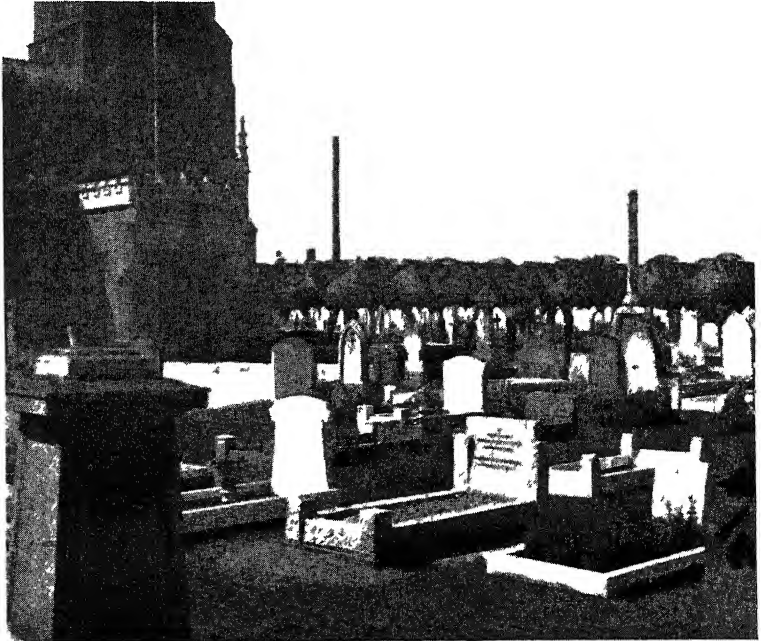


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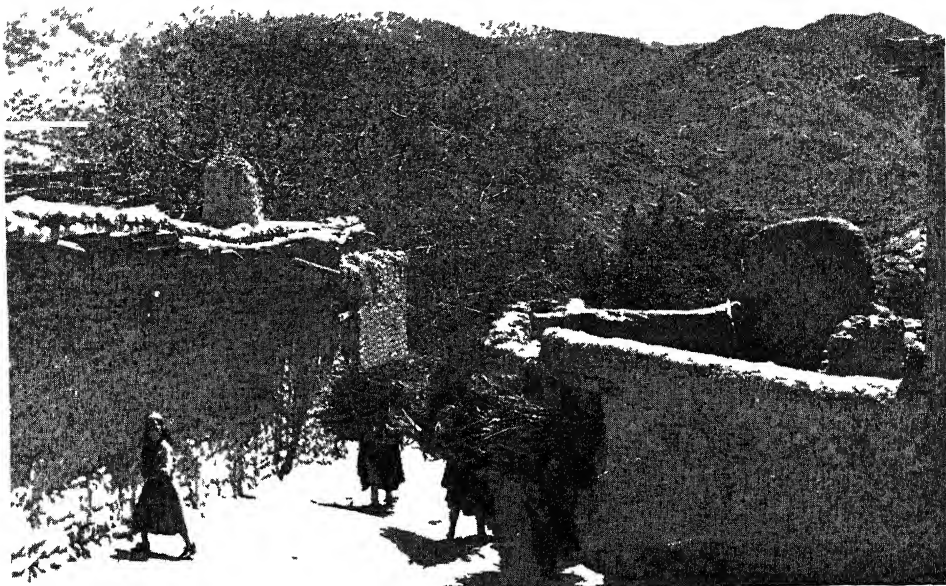
*Cambridge has miles of such streets as this The houses may be owned by the Colleges but the whole district remains an unknown land*

maintain, not destroy, agricultural land and rural beauty Only so can we retain the best of the old in a world which must be ever new

(Opposite)  
*The threat of Heavy Industry Great cement works already exist — fortunately on the leeward side— only two miles from the heart of Cambridge (Right) The threat of Light Industry an old Cambridge parish churchyard now hemmed in by factory buildings*

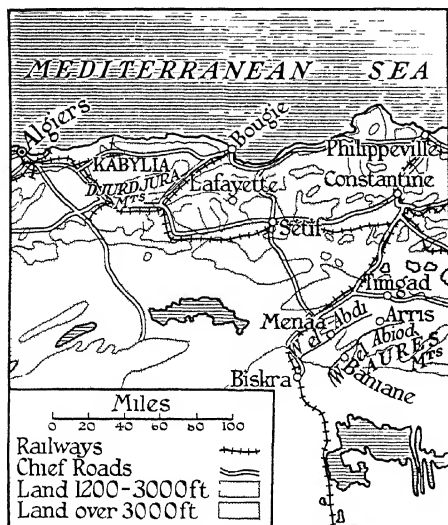


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# In the Mountains of Algeria

by GEORGE H T KIMBLE

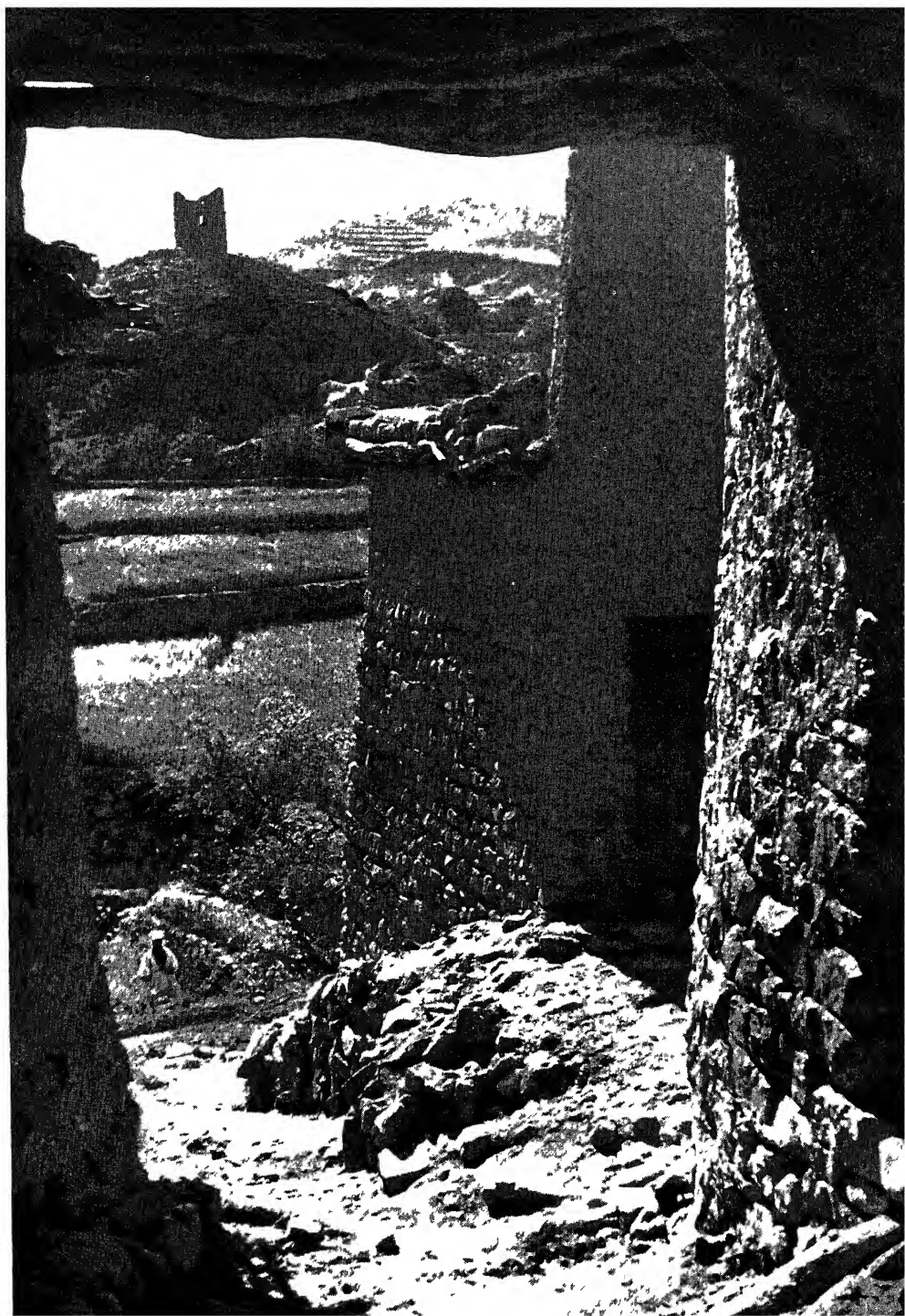


Stanford, London

ALTHOUGH I had taken the precaution of reading as much as I could about Algeria before I went there, I was surprised to find frozen landscapes in April and the high passes through the Atlas Mountains still blocked by deep snowdrifts. This at a time when strawberries were being gathered in the Algerian valleys leading down to the Mediterranean. A second surprise was the complexion of the inhabitants, many of the Berbers, who with the Arabs constitute the majority in a population of some seven millions, might be mistaken for Anglo-Saxons. Experts say there is a racial link between the two. My third surprise was the contrast between life on the coast and in the interior. The at times

(Above) *In contrast to most Moslem communities, the women of Menda, in the Aurès Mountains, go unveiled. They do most of the heavy work.* (Opposite) *A 'street' in Menda, the ruined tower was formerly used as a look-out from which the watchman could warn the village of an impending tribal attack.*







*The Romans in Algeria built many fine cities round the foothills of the Atlas Mountains. Timgad, with its spacious colonnades, elegant baths, public buildings and works of art, still bears witness to the prosperity of the 'corn, wine and oil' economy of those days*

sophisticated atmosphere along the seaboard reminded me of the South of France. The fact is, of course, that the French have striven to turn the Algerian coast into a southern annexe to their Riviera, and to organize its urban and rural economy on similar lines. Up to a point they have succeeded. Algiers lacks none of the amenities which have made Nice and Cannes, for instance, attractive to the tourist, while the fertile lowlands fringing the Mediterranean are devoted to the cultivation of such characteristically Provençal crops as the vine, olive, cereals and early fruits and vegetables.

But if the coastal plains are occidental in character, the mountainous interior is unmistakably oriental. Apart from one or two 'routes nationales', there are few roads in the mountains, which means that the best way to get about is still on mule- or camel-back. In parts of the Aurès Mountains north-east of Biskra signposts still give the distance between places in hours—for mules! Just how difficult

the going is in this region may be judged from the fact that even the road-building Romans left it pretty much as they found it. The foothills and plains around the Aurès, on the other hand, abound in evidences of Roman occupation.

Nor have the various Arab invasions of the country left much mark. The Berbers have been 'Arabicized' to the extent of becoming, nominally, Mohammedans, and adopting Arabic as the common tongue in mosque and market-place, but they were never 'conquered' by the Arabs, who made no attempt to colonize their mountains. After thirteen centuries there is still a clear division between the upper limit of Arab settlement and the lower limit of Berber settlement, and among themselves the Berbers still speak a language which is unintelligible to their lowland neighbours.

Almost all Berber customs bear witness to their traditional aloofness from the peoples around them. Their farm customs, for instance, are today as crude as those of their



*The primitive wooden plough, which the ancient Egyptians would probably have considered old-fashioned, does no more than scratch the soil. As it is customary to sow the crop before ploughing, a good proportion of the seed is not even covered over.*

ancestors of two thousand years ago, a wooden plough that the ancient Egyptians would probably have considered old-fashioned is still used, and, until recently, one of the Aures Mountain tribes employed a block-and-tackle device almost identical with that described by Cato in his treatise on agriculture.

Apparently the Berbers are conscious of shortcomings in their farming methods and tools which they try to offset by the practice of semi-pagan rites. One spring afternoon I arrived at a mountain hamlet to find all the men and boys adjourning to an olive grove nearby for the purpose of 'blessing the plough'. Though a few ploughs were there—one man had carried his more than two miles to make sure of his blessing—the feature of the gathering was the prodigious amount of food. Upon inquiry I learned that the whole village had clubbed together to buy out of their penury the carcasses of two bullocks, which were at that moment being divided into equal portions—meat, fat and entrails—among the

company. In addition there were large wooden basins full of *couscous*, a mush of semolina smothered with a kind of vegetable soup, which was devoured on the spot (it had been a hard winter and this was the first good meal many of these Berbers had had for months). The meat, however, was taken home, dangling on the end of a piece of string, to provide a 'blow-out' for the family. I asked the man with the plough, which had been sprinkled with blood by the sheik, if he could explain the purpose of what had been done; all he would say was that there would now be enough sunshine to bring his figs to maturity; his trees were well up the mountain-side and, near the normal cloud base, sunshine was by no means certain to ripen them.

For many Berbers figs are the main food. With another tree-crop, the olive, they are better adapted to high altitudes and rugged country than are cereals or even vegetables, and less likely to induce soil erosion, the curse of high Barbary as of many another mountain country.



*It is a poor souk (market) that does not attract a crowd of more than two or three thousand men. The Lafayette market (above) often has an attendance of 10,000. (Below) Home of a Berber community in the mountains of Kabylia.*





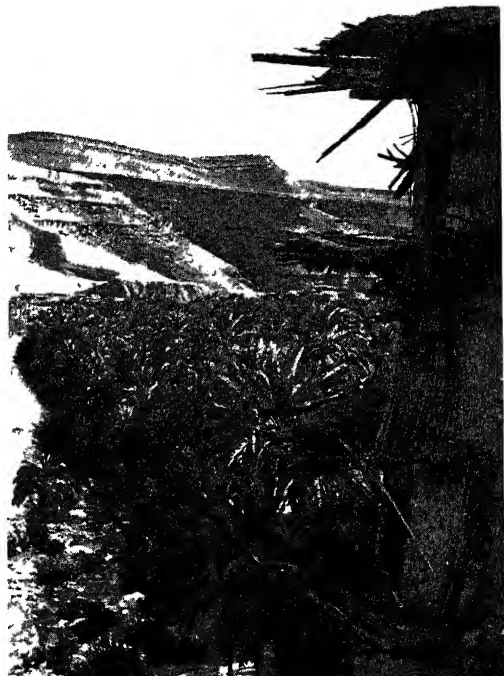
Where conditions allow of their cultivation, cereals (mostly oats and barley) and vegetables (beans, peas, lentils, etc.) are raised, but yields are generally poor, unless the land is terraced and irrigated. When this is done, as in the Aures Mountains, land values soar and competition for water rights becomes keen. For the privilege of drawing water—when the land needs it badly—from a single channel the size of a street gutter, many Berbers will gladly pay 250 francs a day if they don't, they may quite easily lose the whole crop. And crops husbanded in this way pay good dividends, though few cultivators find themselves with a marketable surplus at the end of the harvest. In fact, they are more accustomed to shortage than surplus, which explains the precautions taken when crops are ripening. To a man they build themselves booths, sometimes on stilts, in which they pass the night keeping guard with muskets of antique design. Nor is their vigil at an end when the last trees and plots are stripped, because the fruit, such as figs and apricots, has then to be laid out to dry on the flat roof of the owner's house, and in the Aures the houses are so arranged that one man's roof is, more often than not, another man's roadway.

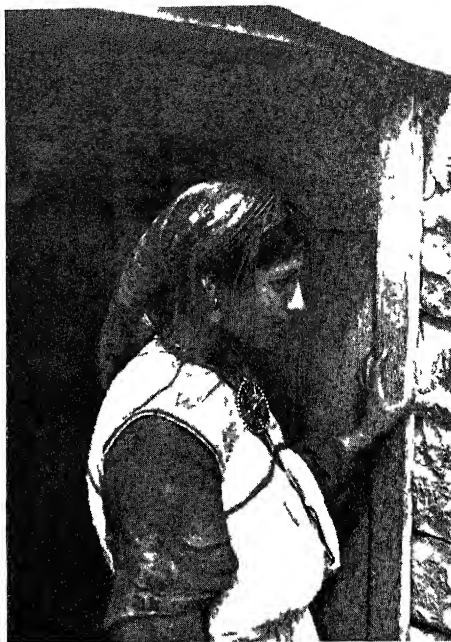
In the southern Aures the crops are all garnered by about July and there is nothing more to be done on the land until the winter rains. In the meantime, as pasture is unobtainable locally, these Berbers (or Chaouias, as they are called in the Aures) are compelled to drive their animals to the better-watered ranges five or six days' journey further north. These migrations present a remarkable spectacle—the spectacle of a whole community, even a whole tribe—with arms, baggage, domestic animals, flocks and children—on the march, one might almost say, in flight. Roads being what they are, tempers as well as footwear tend to get frayed. However, the coming of civilization has done at least one good thing for these people, it has brought old motor tyres which they can buy for next to nothing these they cut up into suitable lengths and make into shoes much more durable than the usual alfa grass sandals. They call them 'tomobiles', and have already come to distinguish between good rubber and bad. When asked if his shoes were proving satisfactory, one muleteer replied in an almost offended tone "Can't you see I'm wearing Michelin tyres?"

While the Chaouias are away most of their families shut down their houses, but before doing so remove their valuables to a communal storehouse known as the *guelāā*. Built



(Above) At the souk you can have the most painful tooth extraction in the world for ninepence, and very popular it is—with the on-lookers. (Below) When Berbers leave their villages for the mountain pastures they remove their valuables to a communal storehouse known as the *guelāā*. The *guelāā* at Bamane is four storeys high, contains fifty-five separate chambers and is perched on the edge of a cliff overlooking the Wadi el Abiod.





(Left) *Where sanitation is unknown and there is no cupboard accommodation, food storage presents a problem which the Berbers of Kabylia have solved by using large store-jars made from a mixture of clay and dung. Note 'Fatima's Hand' on the wall—the Moslem equivalent of the lucky horseshoe.* (Right) *A Berber beauty.*

of mud, stone and date-palm timbers, these storehouses are three or four storeys high, perched on the top of a steep hill or the edge of a cliff. Some of them are accessible only by a rope-ladder. For the guelaâ is not merely a granary, but a fortress as well. In a land of half-empty stomachs, there are many people who would be unable to resist the temptation of plundering the guelaâ of an almost deserted village. I visited one which had fifty-five chambers in it, roughly one for each family in them were stored the year's crop of fruit, grain, beans—in fact all the foodstuffs capable of being preserved.

In the mountains nearer the coast, such as the Djurdjuras of Kabylia, there are no large-scale seasonal migrations, but the men lead a semi-nomadic life, dividing their time between farmstead and weekly market which may be as much as two days' journey away.

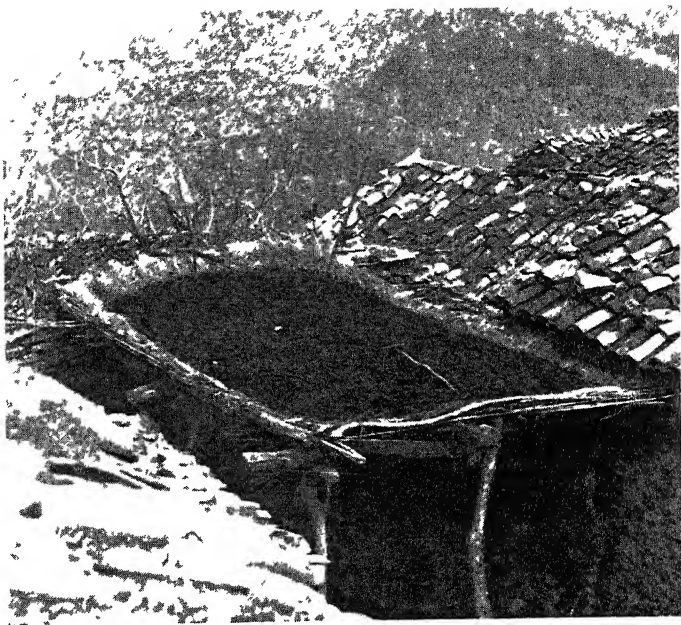
The *souk*, or market, is much more important in Algeria than with us, since all the shopping the people do must be done there. Village stores, even where they exist, can seldom rise above sugar, coffee, soap and monkey-nuts. In a country poorly equipped

with roads and telephones, where few men can read or write, the market becomes, too, the local clearing-house of information and gossip. And not least important, for the French authorities market day is the one day in the week when they mix with the people. It is a poor market that does not bring upwards of two or three thousand Berbers down from their mountains, and some markets attract as many as ten thousand.

The trade of these markets is comprehensive. There are bullocks and sheep, sold mainly for food and slaughtered as required; mules and donkeys for transport, cows and goats for milking, and seedy-looking poultry. In season, there will be bundles of unwashed wool for sale—no Berber woman is worth marrying unless she can weave a carpet or a burnous (the hooded mantle which is worn, summer and winter alike, by all true sons of Mohammed). Also in season, the market is strewn with neatly-piled heaps of oranges, lemons, apricots and melons. Dried figs and dates manage to appear all the year round, though they often look the worse for wear. Other things in regular supply in peace-time



(Right) Cattle have a thin time in the mountains of Algeria. Fortunately the olive grows well in most areas and olive oil, in the Berber diet, takes the place of dairy produce in ours. Here the fresh-picked olives are being ripened off in the sun preparatory to being processed in the local village press.



(Below) Since the coming of the French, the demand for native jewellery has steadily grown. To meet it, many of the more enterprising silversmiths have migrated from the mountains to the French towns in the valleys where, in addition to plying their ancient craft, they act as agents for equally enterprising sewing-machine firms.



include olive oil, generally sold from goat-skin bottles and sampled by dipping a finger and licking it salt, used mainly to keep meat from going bad cotton goods, perfumes, boots and shoes, oil lamps, pots, pans and a wide variety of cheap trinkets And there is always a corn section where business is done on the "good measure, pressed down and running over" principle The buyers see they get it too, for they think nothing of spending half an hour trying to pile a few more grains onto the cone which tops the legal measure Nor is the market complete without its dentist-cum-druggist You can have the most painful tooth extraction in the world for ninepence, and a very popular operation it is—with the onlookers

Many of these markets only came into existence after the French occupation as a direct result of French enterprise And incidentally the authorities made 'a good thing' out of market tax-collecting Latterly all the sites in the market-place were let to the highest bidders those natives who had no regular stall, but relied on touting, paid a tax on everything they brought within the precincts of the square Formerly, anybody was free to buy and sell One result of the later regime was that the selling side of the business was in the hands of fewer men, mostly the Arabs, and, unfortunately for the Berber, who is at the best of times in the grip of the moneylender, this meant higher prices There was supposed to be a fixed price for everything—but only if the gendarmes were about! It was advisable to buy corn only when the authorities were present Barbary is full of measures with false bottoms

But the French have done many things for the Algerian besides levying taxes They offered him French citizenship, the protection of French law, and invited him to be educated on the French pattern In all the schools the teaching has been in French with a curriculum substantially the same as in the metropolitan areas of France This, of course, was not without certain incongruities in one school I visited, boys of 11-12 were being taught to produce and print their own magazine, though some of them could not read what was printed, and to take systematic weather observations The girls, when they attended, which was not often after they reached the marriageable age of twelve or so, were taught knitting, laundering, French cooking and table etiquette—arts bearing no relation to the primitive appointments of their homes which are as bare of furniture as they are innocent of sanitation

At the same time many schools possessed

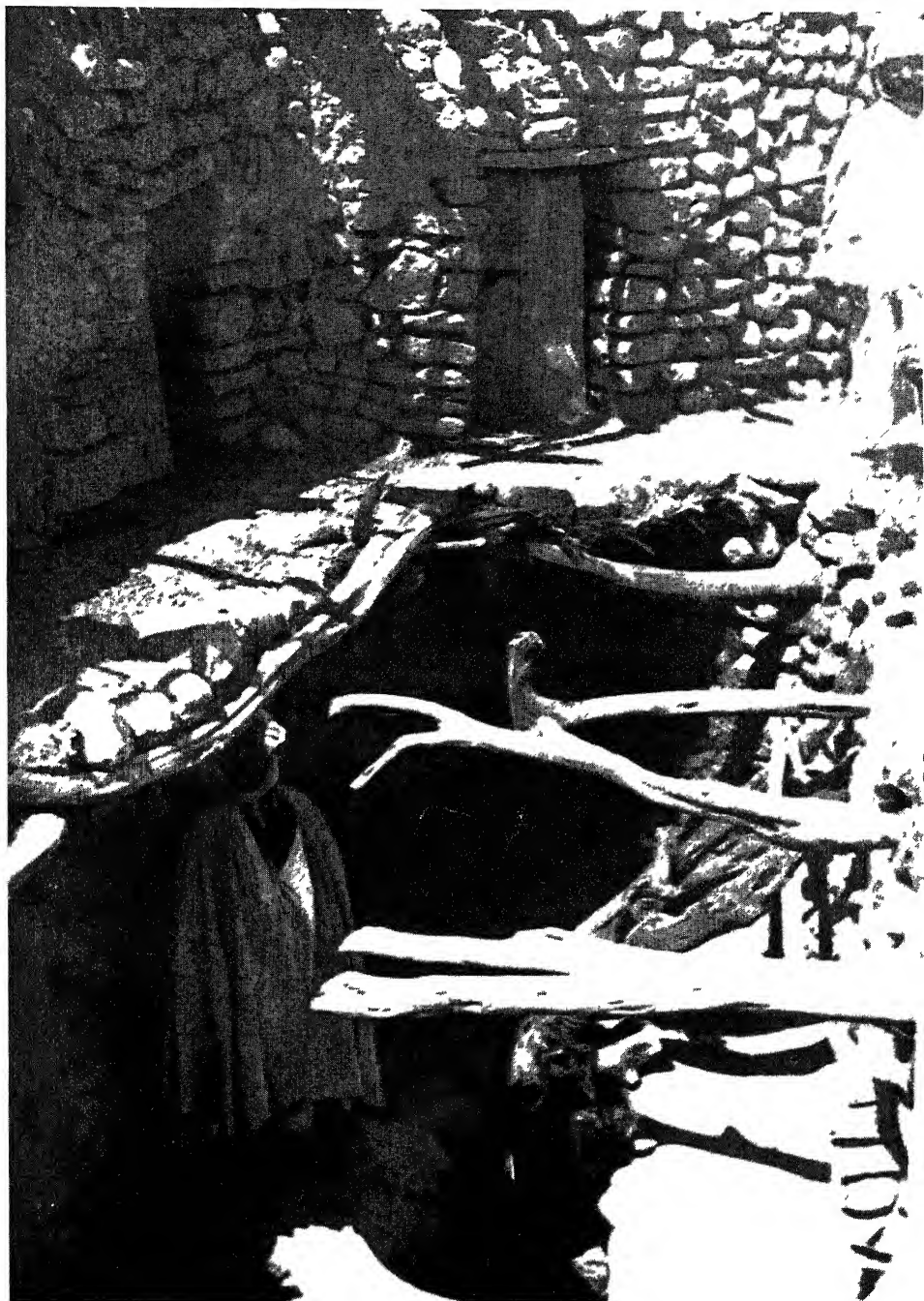
good experimental gardens where the masters could demonstrate the value of new crops (such as green vegetables and temperate orchard fruits), chemical fertilizers, scientific rotations and terracing, for want of which much of the land is declining in productivity Unfortunately, the Berbers are slow to profit by such examples Their fields are full of stones but they would not dream of disturbing them "Allah put them there, let no man remove them" Again, when they are given seed potatoes by the authorities they merely add them to their evening bowl of couscous

The Berbers' main interest in 'culture' has been to learn enough French to get them through their three years' conscription in comfort and perhaps enable them to take a temporary job in one of the big cities, such as Constantine, Algiers or even Paris A surprising number emigrate temporarily Most of them will be engaged in menial work which offers good pay by local standards The younger men often stay until they have accumulated enough money to buy a bride—a good-looking woman costs anything up to 2500 francs—and settle down on a piece of land in their old village

You might imagine that residence abroad would induce a desire for a higher standard of living While it is true that some acquire a taste for iron bedsteads, tables, oil lamps and the like, most of them remain content to spend their nights rolled up in a homespun rug on the hard dung floor, and to eat their food out of a common wooden bowl by the light of a smouldering, chimney-less fire

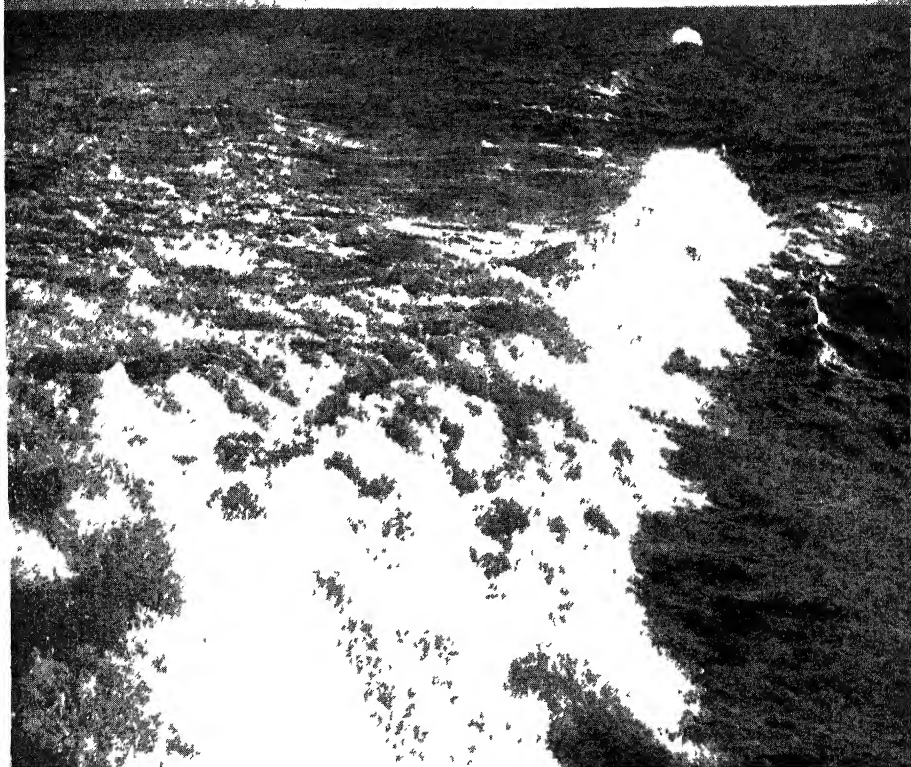
The Berber still lives in much the same way as his forefathers He still settles disputes by blood feuds, with the aid of professional assassins He still practises a most sinister form of medicine the recognized cure for bleeding is to apply a poultice of gunpowder, cow-dung and henna Moreover he is still pagan at heart, and almost everything he does, from ploughing to plundering, requires an accompaniment of charms and incantations In such a world it is not to be wondered at that French and Berber find themselves perpetually at cross-purposes

(Opposite) Looking into the 'well' of a *guelāā* Communication from one floor to the next is by means of protruding date palm timbers Each chamber has its own cumbersome wooden locking device and is large enough to hold a family's store of dried fruit, grain, beans and private belongings



# The Convoy

by CECIL BEATON



*Mr Beaton has recently returned from an official tour of the Middle East battlefields. He gives here his impressions of what it feels like to travel in convoy.*

TIME and place of departure were "Most Secret", the baggage had to be specially labelled—that was all we knew.

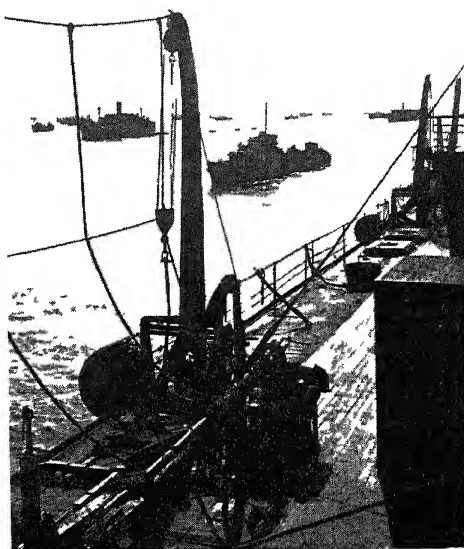
Railway stations at night present some of the most warlike scenes we see in war-time England. Here the fervid, hasty farewells of

soldiers, sailors and airmen take place in the darkness that is only broken by the puffs of red smoke from the engine funnels.

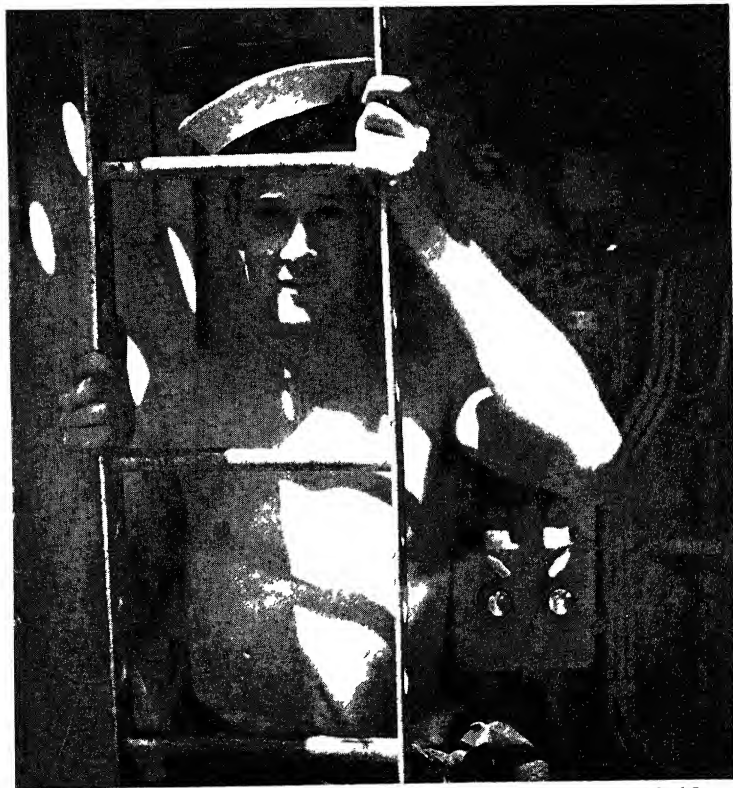
Necessarily the organization that has planned such a tremendous convoy as this must be on a giant scale. Yet delay after we



*Cecil Beaton*



*Cecil Beaton*

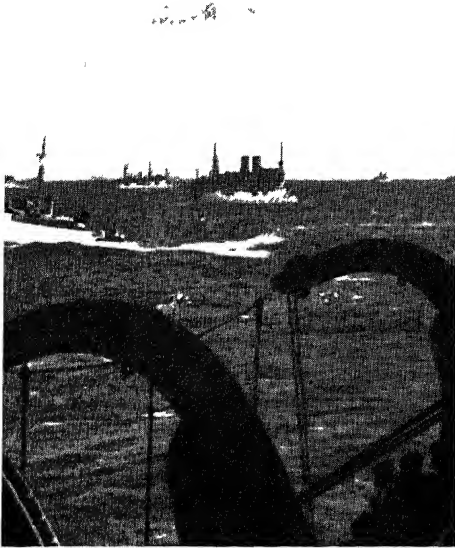


(Top, left) *Duffle-coated officer on the bridge at the start of the voyage* (Top, right) *View of some of the convoyed ships and their escort* (Below) *Sailor in sunshine*

*Cecil Beaton*

have lost contact with the shore is brief. We enjoy spending the days hanging over the side of the ship awaiting from Admiralty the order to sail. We watch the gulls weaving about in an atmosphere of pearly haze, a Whistlerian sunscape. We welcome the arrival of an American destroyer—good augury for our trip.

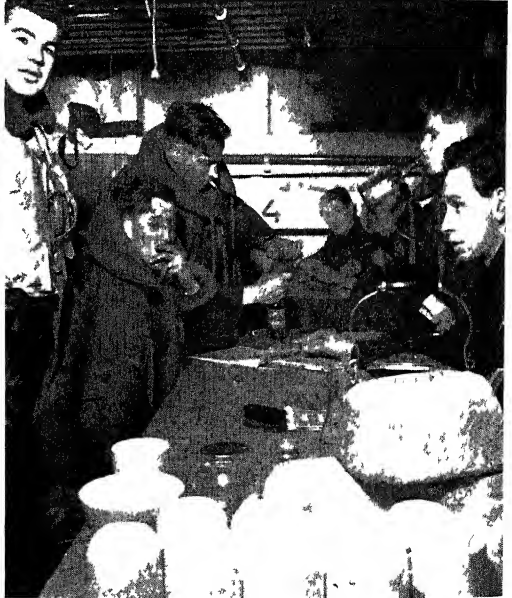
Before the war our ship had been a luxury pleasure cruiser. Even now, behind her coating of armour plating and camouflage paint, she shows signs of her former existence. Some of the doors are marked *Señoras*, but we are an all-male populace aboard, a world comprised of men from all walks of life: service men, Government officials and technical experts. One, now an armaments manufacturer, had been a fighter pilot in the last war.



(Left) "At daybreak we find ourselves in the centre of a vast flotilla of many sorts of ships. Our neighbours, travelling in the same direction at the same rate, rob us of any sense of speed". (Below, left) Sailors splicing rope, (right) Canadian pilots on the mess deck. (Opposite, top) The 'teeth' of the Convoy, (bottom) lunch time for the officers on board one of the cruisers.

Ministry of Information  
Cecil Beaton

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We all ask one another questions. When do we sail? Where do we arrive? No one knows the answers for certain. There are no carpets now and in place of books in some of the cases in the former library are rows of revolvers. The corridors are lined with guns. The erstwhile First Class dining-room with its elaborate rococo balconies is now converted into a mess deck for the rating passengers whose hammocks, baggage and photograph souvenirs transform the scene.

The Commander flashes his torch onto me in the dead of the night. "Would you like to come up onto the bridge with me—I have something to show you?"

We climb the ladder staircases. Deep and muffled voices are heard, small lights flash signals in the dark. The Captain, in his sheepskin coat, gives his order into the mouthpiece, his instructions echoing below into the bowels of the ship. The hum of the engines is heard, the anchor is raised. Stealthily four thousand tons of metal are precipitated smoothly through the night and we start our hazardous journey in the dawn.

At daybreak we find ourselves in the centre of a vast flotilla of many sorts of ships, magnificently escorted, most of them prized at more than one or two million pounds and each carrying valuable cargo. Our neighbours, travelling in the same direction at the same rate, rob us of any feeling of speed. All the ships in the convoy look like toys drawn across a pond on a string.

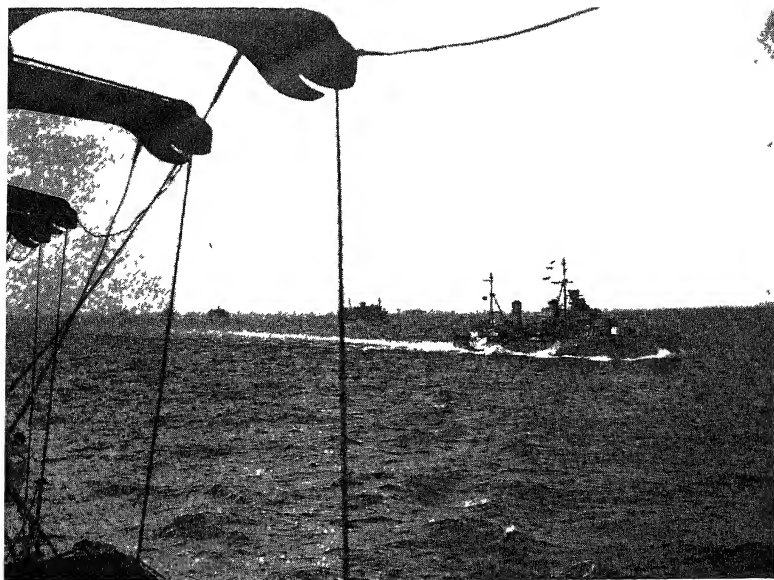
Nothing sensational happens on the trip—nothing that makes news in the newspapers. Yet by the very fact of its major uneventfulness this journey marks a further triumph for the Navy. Here is just another instance of a convoy getting through safely.

Each man carries his lifebelt and is given a tin of iron rations—concentrated food in



*Cecil Beaton*





*Above decks flags are hoisted to communicate with the other ships of the Convoy, below, passenger troops write home, play 'nap' or poker. Nothing sensational happens. The journey marks a further triumph for the Navy just another instance of a convoy getting through safely.*

Ministry of Information

Cecil Beaton



pastille form—the rafts are secured and rubber floats made fast. Tins containing fresh water are attached to them in readiness. The R A F passengers take their watches on the bridge looking out for hostile aircraft. Preparations for all eventualities are made. Bugle-calls have sounded us to action stations, signals have instructed us to rehearse “abandon ship”.

Soon all sense of time is lost, the days of the week submerge into one long day as imperceptibly the water becomes more blue, the sun gains in strength. The sailors have their favourite tune in their heads, down the corridor is one man who sings nothing but *The shamrock you're wearing*, another croons *Elmer's Tune*. In the afternoon they sew, ‘make and mend’, one plays an accordion, and another on his mouth-organ dirges *Way down upon the Swanee river*. Lying in their bunks with walls pasted with photographs of Hedy Lamarr, Lana Turner and Veronica Lake and ladies with low-cut bodices to their well-rounded bosoms, they talk as sailors must have talked since the days of Drake. The tradition of the sea is unchanging, perhaps because the sea itself is unchanging.

The passenger troops write home about the ‘movies’ shown aboard. They write about the food and the dolphins and sharks they have seen. They exaggerate the roughness of the sea, and any incident they may imagine. At least one of them breaks the news to the girl he left behind that he is not free to marry her after all. They play ‘nap’ and poker. At



*Cecil Beaton*

*RAF Pilots leave the Convoy in a launch some to fly another stage to their destination, others to find local colour ashore*

the end of a game the bright one says "You ought to be given the V C for your courage in that hand." The other replies "I wouldn't have dared if we had been playing for money." The Chief Engineer, in a siren-suit with a torch in his hand, inspects the engine and boiler-rooms, which, with their pipes and tubes covered in white asbestos, look like the

intestines of antarctic prehistoric animals. The storekeeper unfastens the padlocks of the medieval dungeon-like safe where, in an ice atmosphere, food is stored, enough for five hundred people to live upon for a year.

Cypherers and decoders work twenty-four hours of the day as signals come in by the

hundreds. These messages are pleasant and friendly links with Whitehall that create confidence in most instances. Flags are hoisted to communicate with the other ships of the convoy. The plotters in the small Holy of Holies, the plot-room, mark with flags our progress and the positions of submarines reported to be in the vicinity. The Commander in his cabin is exchanging sea stories with a number of his contemporaries. He has not come across them since their days together at Osborne. They are now passengers, many of them Commanders on the way to join their ships in the far corners of the world. The Captain never appears even for meals—he remains on the bridge.

A submarine is reported seen on the surface at position so-and-so, two destroyers dash to the attack, depth charges are dropped, our ship shudders with the impact. On their return the destroyers report a conning tower seen for a few seconds. The interpretation may be that the submarine was forced to the surface by the explosions, but might contrive to continue unhampered on its way. Bodies or debris must be sighted before a 'probable' is claimed.

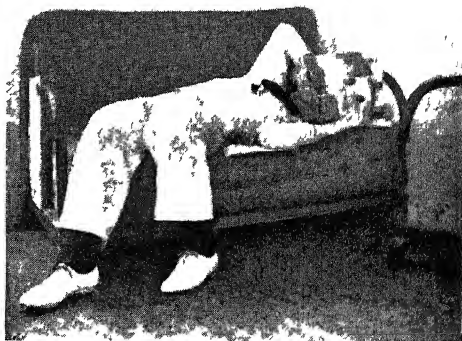
On Saturday nights the officers drink a glass of port to 'wives and sweethearts', and one wag never fails to make the conventional retort "And may they never meet". On Sunday the ship's company sings the hymn *For those in peril on the sea*. One morning is given to gun practice, and the roars and echoing booms create an artificial thunderstorm: the tracer bullets look like fireworks. The flashes of neighbouring guns are seen long before the answering explosions are heard and we realize the vastness of the sea. We are given a sense of distance.

By degrees all woollen garments are shed. On a specific day everyone appears in tropical kit. The ship's company look like guests at a party on the stage. "In Act 2 the scene changes." The Chief Engineer is particularly comic in his white shorts and little boy's socks. On the 'Orders of the Day' board the Commander warns us against the power of the sun's rays: "Anyone who sunbathes to excess may expect, and will receive, little sympathy from the Ship's Doctor." At night the decks are strewn with white draped figures like rows of Greek statues. It is too hot to sleep below. The sea by day is the colour of grape hyacinths. The flying fish look like dragonflies.

An aeroplane flashes a message, "An armed cruiser has been seen travelling in our direction", and is off in chase. Our course is altered, tin hats are produced, every man

aboard becomes a fighting unit, and hastens to make his contribution to the prospective fight. Everyone waits. The excitement dies down as the rumours pass through the ship and, like voodoo drums, the news has gone round of the false alarm. The Commander receives a signal "Think old So-and-so must be 5th-columnist, giving us that scare." At this stage the language of the sailors has influenced the speech of the Government officials and the technical experts. Few of the civilians are recognizable as the men that left that secret port in their tweed coats. Many are suffering in various stages of sunburn. One, like a pirate in an amateur pantomime, has been painted by the M.O. with a false purple beard against 'scurvy'. Some of our escorting destroyers return home to re-fuel. Others arrive to replace them.

One morning we learn that we shall arrive the day after tomorrow at 09 00 hours so the largest convoy that has yet gone out has succeeded in eluding the multiple dangers of the deep. The Captain appears for dinner wreathed in smiles. He has the first drink of this voyage to celebrate another important score marked up against the enemy.



Cecil Beaton

*Journey's End—in the 'Under Twenty Club', Alexandria*

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from the  
Sea!”*

*Middle East*

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*from Sea,” and among the contents were 2 tins of “Barneys” which, although badly battered, the tobacco itself was in perfect condition.*

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*Yours faithfully,*

[This letter from the Middle East can be inspected.]

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